Police Enforcement of Cannabis Possession Laws in Canada: Changes in Implementation by Street-Level Bureaucrats

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Abstract

Criminal law in Canada is established by the federal government and should therefore be applied equally across the country. However, the nature of independent police departments in every jurisdiction can result in the uneven application of the law. Evidence suggests that cannabis possession laws are one such example. Although cannabis has been illegal in Canada since 1923, some police departments appear to have de facto changed cannabis possession criminalization through reduced enforcement rates. The set of circumstances unique to this situation – the lack of a central political actor and the decentralized nature of the enforcement by police officers – results in a new mechanism by which policy outcomes can change, namely implementation conversion. Specifically, this thesis attempts to answer two research questions: (1) is implementation conversion in the enforcement of cannabis laws taking place across jurisdictions in Canada, and (2) is there equal enforcement across jurisdictions over time, and if not, what are some of the factors that affect police officers' decisions to charge an individual for a drug crime? To this end, a charge rate was calculated with data from Statistics Canada for four different drug offenses to determine the likelihood that a police officer in a particular jurisdiction would charge an individual for a drug offense. Data from 49 jurisdictions over a 16-year period were used to run the analysis. A graphical and regression analysis of the four dependent variables was undertaken. The data showed a significant decline in the enforcement of cannabis possession over time across nearly all jurisdictions; this decline was not found in the enforcement of the other three drug offenses that were examined (specifically, cannabis trafficking, distribution and production (TDP), cocaine possession, and cocaine TDP). Among the variables that were examined as factors affecting cannabis possession charge rates, provincial dummy variables and the type of police force (e.g., RCMP, municipal) were found to be statistically significant. The findings in this thesis reveal the influence that street-level bureaucrats have in determining the implementation of legislation.

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Table of Contents

List of Tables

List of Figures

1.0 Introduction

Cannabis policy in Canada has been a highly controversial issue for several decades. While there was no documented debate when cannabis was declared illegal in 1923 (Carstairs, 2000), cannabis policy has received increasing attention since the 1960s, when its popularity sharply increased among a certain segment of the population (Erickson & Fischer, 1995). Cannabis policy was brought into the forefront of mainstream politics by two influential Senate reports, in 1972 and 2002, which recommended to the government that marijuana be decriminalized and legalized, respectively (Canadian Senate 1972; Canadian Senate 2002). The prospect of either decriminalization or outright legalization of cannabis over the years helped to mobilize stakeholders who opposed such efforts for a variety of moral, economic, social, and health reasons. In contrast, many citizens find cannabis, similar to alcohol, to be a preferred recreational substance, and feel there is very little harm in its use. More recently, influential reports had echoed the call for a change to recreational cannabis policy (Carter & Macpherson, 2013; LSE ideas, 2014), and the Liberal government responded in the Spring of 2017 with legislation that aims to legalize the sale and possession of recreational cannabis by July 2018 (Kirkup, 2017). This change to cannabis policy is in line with public opinion polls, which found that 68% of Canadians were at least somewhat supportive of cannabis legalization (Leblanc, 2016b). After much debate over many years, cannabis policy is likely to undertake a fundamental shift towards full regulation and legalization over the next two years.

Cannabis has been an illegal substance since the 1920s, and will remain an illicit substance under the Criminal Code of Canada until legislation is passed by the federal government. In Canadian Law, Section 91 of the Constitution Act of 1876 provides jurisdiction to the federal government over criminal law (Government of Canada, 2012). Therefore, cannabis' inclusion in the Controlled Drugs and Substances Act – a piece of criminal law – can only be changed by the federal government. While successive judicial challenges to the prohibition of medical cannabis, beginning in 2000 (R v. Parker, 2000), have resulted in the creation of a federally-supported medical marijuana program in effect today, the Controlled Drugs and Substances Act criminalizes both the sale and possession of recreational cannabis. Individuals charged with cannabis-related offences under the Criminal Code may face fines, jail time, and/or lifetime criminal records.

Given that cannabis offenses are federal law, they should apply equally across the country; however, the provinces have jurisdiction over the administration of justice (Government of Canada, 2012). The provinces often grant this jurisdiction to larger municipalities that can provide their own policing services. Smaller municipalities are provided policing services by either a provincial police force (as in Ontario or Quebec) or the Royal Canadian Mounted Police (RCMP). The collection of individual police departments across the country can lead to differing enforcement policies by individual police departments.

In addition, the police forces that carry out enforcement may have different goals and objectives than the government, regardless of their jurisdiction. Recent evidence suggests that the unequal enforcement of cannabis laws is occurring throughout Canadian jurisdictions; a Globe and Mail article revealed that, in 2012, the enforcement of penalties for cannabis possession varied substantially between Canadian cities (Offman & Hui, 2014). If caught and processed by local law enforcement, a resident of Saskatoon had an 82% chance of being charged with possession of cannabis, while a resident of Halifax only had an 18% chance of being charged; the Canadian average was 42% (Offman & Hui, 2014). These findings suggest that law enforcement agencies were selectively enforcing cannabis laws.

This change in the enforcement of cannabis laws can emerge in different ways. One way is through what is known as policy conversion in which policy and institutions are actively redirected to achieve ends that are different from the original purpose of the policy or institution, without changing the formal rules (Hacker, Thelen, & Pierson, 2013). This process does not appear to be operating in Canada, since there is no evidence that cannabis policy has been redirected in the way that Hacker, Thelen, & Pierson (2013) have outlined. Instead, the source of the change in enforcement appears to be taking place at the implementation level.

In theory, policy implementation is a simple concept, defined as the process by which "…governments put policies into effect" (Howlett, Ramesh, & Perl, 2009, pg. 12). In reality, however, the process of policy implementation is highly complex and requires coordination across the activities and functions of many different stakeholders and levels of government. Moreover, adequate and ongoing resources need to be secured to finance implementation, support from special interest and political groups needs to be maintained, and clearances by regulatory agencies need to be obtained (Bardach, 1980; Pressman & Wildavsky, 1974). When

the implementation process includes the enforcement of criminal law, section 91 of the Constitution Act of 1867 (Government of Canada, 2012) grants jurisdiction over the administration of justice to the provinces. Thereby each province has the constitutional authority to administer criminal law through policing and prosecutions, with policing usually acting as the first line of enforcement. When criminal law requires the proper enforcement of a policy as a part of the implementation process, that policy needs to be enforced to be effective. If the enforcement of a particular law diminishes or ceases altogether, then the policy has – in effect – changed from its original mandate.

Frontline public servants with substantial discretion in the execution of their duties are known as 'street-level bureaucrats' (Lipsky, 1980). The actions (or inactions) of some law enforcement agencies suggest that these street-level bureaucrats do not view cannabis offenses with the same level of concern as they once did, possibly due to changing public sentiments and more urgent policing priorities (Offman & Hui, 2014). Law enforcement officers in Vancouver have conceded that cannabis possession is not a priority, while law enforcement officers in Toronto are encouraged to use their discretion (Powers, 2016).

In this thesis, a new mechanism through which the outcome of a policy can change is highlighted, one that operates through the implementation stage; this mechanism is referred to as "implementation conversion." Under implementation conversion, street-level bureaucrats who have been tasked with the enforcement of cannabis criminalization can de facto change the outcome of cannabis policy by focusing their enforcement efforts elsewhere.

It is often difficult for government and public-sector managers to effectively monitor whether street-level bureaucrats are enforcing policies to their satisfaction. Governments attempt to take certain actions to improve the accountability of public servants and constrain the behaviour of street-level bureaucrats: job-specific instruction manuals are created for employees in the case of contingencies and the performance of departments and individuals are appraised and audited (Lipsky, 1980). Government officials may also reposition senior bureaucrats to either reward or punish their ability to attain the desired policy objectives of their department. These actions are undertaken by government and senior public servants with the goal of incentivizing and reinforcing certain behaviours in alignment with the desired policy objectives.

Some of the actions taken by the Harper federal Conservative majority government (2011-2015) could be interpreted as an attempt to reduce the likelihood of implementation conversion, by exerting more control over cannabis policy implementation and enforcement. In 2012, the Conservative government instituted mandatory minimum sentencing for individuals caught growing six or more marijuana plants with the purpose of trafficking (Fine, 2015a), the effect of which limited the discretion of judges in handing down sentences to offenders. The Conservatives had also embarked on a national five year anti-drug strategy, designed to increase funding to law enforcement agencies for tackling drug crimes, while concurrently reducing funding for drug treatment programs (Geddes, 2012). In 2015, they announced additional funding for the RCMP to focus on marijuana crimes, if they were re-elected (Press 2015). Funding of this nature ensures that street-level bureaucrats have less autonomy over their enforcement choices, and suggests that future funding will be contingent on the continued enforcement of drug crimes. These actions may ultimately prove to be ineffective, as the mandatory minimum sentencing for marijuana cultivation was recently overturned in Ontario (Fine, 2015b), and the federal Liberal government has introduced legislation to legalize recreational cannabis. Nevertheless, these actions were part of the Conservatives' 'tough-on-crime' approach to drug laws during their time in power, and may have helped to limit policy conversion and implementation conversion by constraining the actions of street-level bureaucrats.

The purpose of this thesis is to undertake an analysis of drug enforcement data from several Canadian cities to investigate the differing enforcement of cannabis laws, and thereby determine whether implementation conversion is occurring in some jurisdictions. Even though cannabis is likely to be legalized by the end of 2018, there has been pressure to change cannabis laws for decades. The pressure to change cannabis laws, coupled with the growing public acceptance of cannabis, may have provided opportunities for implementation conversion to have occurred in advance of this change in policy.

This thesis will also examine the classic understanding of policy conversion as an issue of interest on its own. The change in policy outcomes may be better understood in some cases by examining those individuals tasked with the ongoing enforcement and implementation of policy. Importantly, this thesis also provides the opportunity to conduct an initial examination of some

of the potential causes of implementation conversion over time. When implementation conversion arises, it is likely occurring through changes in enforcement, as ongoing implementation requires the ongoing application of rules or directives to be effective. If differing levels of enforcement are found across jurisdictions, this variation can also be exploited to examine which factors affect a police officers' decision to charge an individual for a drug crime. More specifically, the research will seek to answer using empirical analysis the following questions:

i. Is implementation conversion in the enforcement of cannabis laws taking place across jurisdictions in Canada?
ii. Is there equal enforcement across jurisdictions over time, and if not, what are some of the factors that affect police officers' decisions to charge an individual for a drug crime?

To examine the posed research questions, the thesis is organized as follows: Firstly, cannabis' legislative history and background will be explored, followed by a literature review of the seminal work on policy implementation, the characteristics of policy conversion, and a portrayal of implementation conversion. The thesis will then move into a description of the empirical data being used for the analysis, followed by an exploration of the likely relationships between the charge rate for several drug offenses (including cannabis possession) and various explanatory variables, such as population, province, year, provincial party, federal party, and others. A graphical analysis will then be carried out to obtain a preliminary sense of the extent to which the expected relationships occur.

Since the graphical analysis is necessarily only partial in nature (i.e., only one explanatory variable can be examined at a time), the thesis then moves to regression analysis to examine the impact of the various explanatory variables while holding the effect of the others constant. In this analysis, the key explanatory variable of interest is Year, with the coefficient on this variable expected to be negative. The other explanatory variables are included to account for any key economic and political factors that might have increased or decreased systematically over time. If, after accounting for these factors, there is still a Year effect, then there is more confidence in the conclusion that the charge rate has declined over time.

It is important to note that the empirical analysis carried out in this thesis is meant to explore the correlational relationships between the dependent and explanatory variables, rather than to prove

causal effects. Further analysis would have to be carried out on the data to make claims of causal effects; the concluding chapter will make recommendations for future research that could begin to probe such effects. The concluding chapter also includes a discussion of the results and policy implications.

2.0 Cannabis History and Background

2.1 Introduction

In chapter one, a brief background of cannabis history in Canada was explored, which led into the preliminary finding that cannabis possession laws are not being enforced consistently across Canadian jurisdictions. After drawing on some initial literature, two research questions were posed which will guide the subsequent analysis and discussion in this thesis. Before this analysis can be undertaken however, it is important to provide both a political and historical context of cannabis in Canada. This chapter will detail cannabis' legislative history in Canada, as well as outlining where the current federal political parties stand on the issue of cannabis policy.

2.2 Legislative History of Cannabis in Canada

Cannabis was a relatively unknown drug when it was made illegal and added to Canada's Confidential Restricted List in 1923 (Carstairs, 2000). In Canadian Law, Section 91 of the Constitution Act of 1876 provides jurisdiction to the Federal Government over Criminal Law (Government of Canada, 2012). Therefore, cannabis' inclusion into the Confidential Restricted List – otherwise known today as the Controlled Drugs and Substances Act – as a piece of criminal law, applies equally to all provinces and territories. The inclusion of cannabis as an illegal substance is not fully understood, especially considering that the first seizure of cannabis did not take place until 1932, almost a full ten years later (Schwartz, 2014). There are two prominent theories that have been suggested. The first is that cannabis was made illegal because Canada was under international pressure; it was discussed at several international meetings, culminating in the Geneva Convention (1924-1925), where 'Indian Hemp' was brought under international control (Carstairs, 2000). The second theory suggests that the writings by Judge Emily Murphy on marijuana contributed to public fears about the drug (Bourrie, 2012). In her writings, she warned the public that there were only three ways to rid oneself of a marijuana addiction: insanity, death or abandonment (Murphy, 1922). Regardless of its origins, the inclusion of marijuana as an illegal substance took place without any discussion from either the House or the Senate (Schwartz, 2014), resulting in a policy of cannabis criminalization that would remain in place for over 90 years.

Marijuana use did not become mainstream until the 1960s, when its popularity sharply increased among particular segments of the population (Erickson & Fischer, 1995). At that time, the maximum penalty for possessing small amounts of cannabis was six months in jail and a $1000 fine – a summary conviction offense (Hathaway & Erickson, 2003).[1] With the enactment of the Narcotic Control Act of 1961, simple possession of cannabis carried a maximum sentence of seven years imprisonment – tried by indictment (Usprich & Solomon, 1993).[2] The Liberal government at the time responded to the increased mainstream acceptance of cannabis in Canada and the rising levels of criminal charges for cannabis offenses by appointing a Commission of Inquiry into the Non-Medical Use of Drugs in 1969 (Fischer, Ala-Leppilampi, Single, & Robins, 2003). The Le Dain Commission, named after its chairman, Gerald Le Dain, published a report in 1972. This inquiry found that adults and youths alike predominantly used cannabis because they enjoyed it (Canadian Senate, 1972). Not wanting to criminalize individuals for seeking pleasure from cannabis use, and finding no evidence of long-term health implications, the Le Dain Commission recommended that cannabis use be decriminalized (Canadian Senate, 1972). The Liberal government at the time, however, made no changes to cannabis law.

2.3 Challenges to Cannabis Criminalization

Cannabis continued to be used recreationally by Canadians, despite its illegality. As a result, over 1.5 million Canadians had a criminal record for simple possession by 2002 (Nolin & Kenny, 2002). The Liberal government at the time decided to form two committees to study the issue of illicit drugs in Canada. The House of Commons Special Committee on the Non-Medical Use of Drugs recommended that small amounts of cannabis possession and cultivation be decriminalized (Torsney, 2002). The Senate Special Committee on Illegal Drug Use ultimately recommended that the sale and production of cannabis be licensed (Canadian Senate, 2002). Legislators, however, did not move to change cannabis laws.

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[1] A summary conviction offense is considered less serious, normally punishable by shorter prison terms and smaller fines.

[2] Indictable offenses are more serious criminal charges. There is no time limit for when an individual can be charged with an indictable offense.

Several judicial challenges have been made to cannabis prohibition, some of which have led to changes. The prohibition of cannabis for medical use was invalidated in 2000, when an epileptic patient challenged it under the Canadian Charter of Rights and Freedoms (R v. Parker, 2000). This paved the way for further court challenges against the government for insufficient access to medical marijuana (R v. J.P., 2003; R v. Long, 2007; R v. Mernagh, 2011), which have led to the development of the medical marijuana program in effect today. Two concurrent cases reached the Supreme Court in 2003, which saw individuals challenge the constitutionality of cannabis prohibition under the Criminal Code (R v. Malmo-Levine; R v. Caine, 2003). In a joint decision, the Supreme Court ultimately rejected the constitutional challenge brought forth by these individuals. These judicial challenges have established precedent for the legal use of cannabis for medical purposes, but not for recreational purposes.

As previously noted, the Liberal Party of Canada attempted to decriminalize cannabis possession in both 2003 and 2004. The first attempt at decriminalization is suggested to have failed because of concerns that US Customs officials might increase security at the borders, thereby damaging cross-border trade (Raaflaub, 2004). The Prime Minister at the time, Paul Martin, reintroduced the same decriminalization bill in 2004, but the no-confidence vote in parliament prevented the bill from being debated further (CBC News, 2005). After regaining control of the federal government in 2015, the Liberal Party of Canada, under Justin Trudeau, fulfilled a campaign promise and introduced legislation to legalize the sale and possession of recreational cannabis by July 2018 (Kirkup, 2017). Although the other two prominent federal parties are not opposed to this legislation, they have stated their priorities; the New Democratic Party (NDP) put forward a motion to decriminalize personal possession (Smith, 2016), and the Conservative Party of Canada have pressed the Liberal government to quickly enact a cannabis regulatory regime to protect adolescents (Leblanc, 2016a).

2.4 Conclusion

As this chapter outlined, cannabis was made illegal with little debate or fanfare in the 1920s (Schwartz, 2014), resulting in a policy of cannabis criminalization that remained for over 90 years. Over the years, an increasing number of Canadians obtained criminal records for cannabis possession, leading to public debates about cannabis criminalization. The federal government

responded to this debate by considering changes to recreational cannabis policy in the 1970s (Canadian Senate, 1972), and again in the early 2000s (Canadian Senate, 2002). Although no changes were made to recreational cannabis laws, the prohibition on medical marijuana was struck down by the courts in 2000 (R v. Parker, 2000), which led to the development of the federally-supported medical marijuana program in effect today. After a few failed attempts in the early 2000s, the federal Liberal government of Justin Trudeau introduced legislation that would legalize the sale and production of recreational cannabis by July 2018 (Kirkup, 2017). The changing public sentiment towards cannabis use since the 1960s led to demands for changes in cannabis policy and possibly changes in the enforcement practices of police. These changing enforcement practices can be best understood by examining both policy implementation and a specific type of policy change – policy conversion.

3.0 Review of Relevant Theories

3.1 Introduction

In chapter one, the concepts of policy conversion and implementation conversion were briefly introduced. Having now explored the historical and political context of cannabis' history in Canada, it is important to describe the background literature from which policy conversion resulted as a theory. This chapter discusses policy implementation as a stage of the policy cycle, describes characteristics of policy conversion, and outlines how this thesis will contribute to our understanding of policy conversion and implementation conversion.

3.2 Policy Implementation

Policy implementation, which consists of "the effort, knowledge, and resources devoted to translating policy decisions into action…" (Howlett et al., 2009, pg. 160), is one of the stages of a traditional policy cycle. The policy cycle, which highlights the ongoing nature of policy modifications (Brewer & DeLeon, 1983), has been refined over the years to typically include five distinct stages: agenda-setting, policy formation, decision-making, policy implementation and policy evaluation (Howlett et al., 2009). Isolating the different policy cycle stages allows scholars to distinguish between the differing roles played by policy actors and institutions at each of the stages (Sobeck, 2003). Policy implementation, although a part of the policy cycle, has its own unique set of considerations and challenges.

Seminal research on policy implementation has highlighted the numerous difficulties that governments face when implementing policy decisions (Bardach, 1980; Pressman & Wildavsky, 1974), highlighting that implementation is a more complex process than some believed (Hargrove, 1975). As an example, the case of a US federal inner-city employment program for minorities revealed how seemingly normal implementation circumstances, such as obtaining the required approvals, often become serious impediments, and how multiple decision points often result in lengthy delays (Pressman & Wildavsky, 1974). Bardach (1980) described the implementation process as "…strategic interactions among numerous special interests all pursuing their own goals…" (pg. 9). Even straightforward implementation needs to consider the

source of funds, approvals from regulatory agencies, and accountability mechanisms (Bardach, 1980). The research that followed in the decades since this early work has produced a large body of work on policy implementation (Saetren, 2005), resulting in better understanding of the complexities associated with this stage of the policy cycle.

When policy objectives require compliance from the target audience, the implementation stage also involves developing the method and scope of the desired compliance. Compliance can take the form of authority-based regulations; delegated or self-regulation, advisory committees or command-and-control regulation (Howlett et al., 2009). Command-and-control regulations that define criminal conduct include the laws enforced by police departments and the judicial system (Rosenbloom, 2007). These laws often outline the potential penalties for individuals in the event of any non-compliance with the policy. For criminal law to be made in Canada, a bill must first be passed through both the House of Commons and the Senate, later becoming an Act through proclamation (Government of Canada, 1998). Once the criminal law is enacted, the division of power outlined in the Constitution Act of 1867 grants jurisdiction to the provinces over the 'administration of justice' (Government of Canada, 2012): the judicial system to prosecute, convict and punish offenders of the law, and law enforcement agencies to enforce criminal law. When administrative agencies empowered to enforce a policy through the law vary in their enforcement of that policy, the resulting change in the outcome of the policy is denoted as implementation conversion.

3.3 Policy Conversion

Policy conversion is a theory of institutional or policy change, whereby the original purpose of an institution or policy shifts to pursue different objectives than what was originally intended (Hacker et al., 2013; Thelen & Streeck, 2005).[3] The formal institution or policy remains stable, but its impact is transformed through its redirection or re-interpretation by strategic actors. This is made possible because institutions and most large-scale policies can achieve multiple ends,

[3] Institutions in the context of this thesis are defined in the formal sense, as "…formalized rules that are in principle obligatory and subject to third-party enforcement." (Hacker et al., 2013, pg. 5). An example of a formal institution in this case would be the Criminal Code of Canada, although the specific elements outlined in the Criminal Code would not be considered a formal institution.

depending on how they are deployed or enacted (Hacker, 2004). Conversion may occur as a result of policymakers responding to real-world challenges by redirecting institutional resources (Thelen & Streeck, 2005). Conversion can also result from the actions of political actors, individuals or organized interests who had no influence on the creation of the rules, but attempt to pivot the institution or policy to pursue ends that are different from its original purpose (Hacker et al., 2013). Conversion allows for policies and institutions to be adapted over time, rather than replaced outright.

The actors who pursue policy change through conversion do so because the opportunities to change policy or institutions through formal means are limited (Hacker et al., 2013). As many authors have noted, there are considerable roadblocks that prevent the legislative changing of an institution or policy. Vested interests encourage the continued existence of policy because of the positive feedback effects that are generated (Pierson, 2000), and the presence of veto players in some circumstances can increase policy stability (Tsebelis, 1995). Even the prospect of creating new institutions or policies can persuade previously neutral groups to oppose the new arrangements (Hacker et al., 2013). These political settings, where authoritative change is difficult, can create strong incentives among actors to seek change through less visible means (Hacker, 2004). Conversion, thereby, can be an attractive mechanism to bring about substantive changes, even in the face of significant obstacles to such changes.

Conversion as a means of institutional or policy change is a more attractive option for political actors if a gap exists between the rules of an institution or policy and their enactment (Thelen & Streeck, 2005). Every institution and policy differs in the specificity of both its intended objectives and how it attempts to achieve those objectives. In the case of laws allowing for maternity leaves from the workplace, there is little room for reinterpreting this policy and how it is applied in the workplace. However, policies "…whose effects depend on interpretation and implementation by other actors…" (Hacker et al., 2013, pg. 12) are more likely to experience instances of policy conversion. This is especially true in instances of social policies that divide their authority between units of government (Hacker 2004a, pg. 247). In the case of police departments, their officers are tasked with the ongoing implementation of laws and rules, and are afforded high amounts of discretion in their work. Institutions or policies whose rules are

ambiguous, and whose enforcement depends on interpretation and discretion, are more likely to be targets of change through conversion.

3.4 Policy Drift

Policy drift is a mechanism of policy change that shares some similarities with policy conversion, but operates with some crucial differences. Policy drift occurs when there has been no formal revision of a policy, yet inaction by policy actors results in a transformation of the policy over time (Hacker 2004). For instance, the original policy may have been designed to protect citizens from a particular socioeconomic risk, but as these risks and other factors invariably change, the ability of the policy to achieve its original objectives may be reduced if updates and changes to the policy are not made (Hacker 2004). Policy drift occurs when these changes are not made, thus effectively changing the nature of the policy.

Both conversion and drift are strategies for changing the outcomes of policies without changing the formal rules themselves, and both mechanisms of policy change are fostered by political settings that make authoritative policy change difficult (Hacker et al., 2013). The crucial difference between drift and conversion concerns the degree to which the policy affords "…actors discretion in their interpretation or enforcement" (Hacker et al., 2013, pg. 12). Policies that rely on their implementation by other actors are more prone to instances of conversion, such as the enforcement of laws by street-level bureaucrats. Policies that are unambiguous are more susceptible to drift, because their specificity won't allow them to adapt over time to changing circumstances. An example would be minimum wage laws, which were designed to protect against socioeconomic risks, but became less effective over time because they weren't tied to inflation. Although policy drift shares important elements with policy conversion, policy conversion is a better lens though which to study implementation conversion.

3.5 Implementation Conversion

All the examples used to illustrate policy conversion in the academic literature focus on centralized actors who convert institutions over time to meet their own needs. Thelen (2004) describes how, in Germany, the artisanal sector and organized labour slowly transformed a

framework that had been established to counter the organized labour movement into the system of vocational training and partnership between labour and capital that is present today. Hacker et al. (2013) uses several examples of how actors used the courts to change the functioning of institutions; companies used litigation to challenge regulations they felt were cumbersome, civil rights groups used the courts to expand the 1964 Civil Rights Act beyond its original aim, and domestic actors in Europe used the original articles of the European Union and the mechanisms embedded in the European Court of Justice to oppose national policies and increase the obligations of the member states, when they were originally designed to resist intrusion by the supranational bodies of the EU. Hacker (2004) showed how conversion was used by mostly Republican political actors to shift the burden of American health insurance onto individuals. Fundamental to all these examples is a centralized political actor or organized group who was able to change the original aims of the institution to serve their own ends without changing the rules themselves.

The examples used in past research have not considered the instances of policy implementation that are carried out by a decentralized group of actors. When a policy depends on the ongoing application of the rules, and thereby continuous implementation, it affords opportunities in which the outcome of the policies can be changed without changing the formal policy. Those individuals tasked with continual enforcement or the application of a policy don't have to be central political figures or powerful actors to change the outcomes of the policy; they can simply be bureaucrats at the street-level with some degree of discretion. Changes to the outcomes of a policy, brought forth by bureaucrats at the street-level, can also occur because of unintentional changes in behavior or actions, rather than explicit and purposeful actions. Street-level bureaucrats are described as "public service workers who interact directly with citizens in the course of their jobs, and who have substantial discretion in the execution of their work…" (Lipsky, 1980, 3). These street-level bureaucrats can still affect policy through it's implementation, even though their actions might not be coordinated.

The original examinations of policy conversion as a mechanism of policy outcome change have not been studied from the perspective of ongoing enforcement by street-level bureaucrats, nor has it been studied from the perspective of shifting priorities rather than overt actions by political actors. Additionally, by studying the enforcement of a policy by a decentralized group of actors

over time, rather than focusing on one policy over time, additional characteristics of implementation conversion may be discerned.

3.6 Implementation Conversion and Street-Level Bureaucrats

Implementation conversion can occur across jurisdictions because of changing enforcement by street-level bureaucrats, driven by agency decisions and procedures. Law enforcement officers, judges and public lawyers are considered street-level bureaucrats who are expected to uphold laws, adhere to policies, and punish offenders, based on direction from senior officials, and agency procedures. As an example, Saskatoon's police officers are strongly encouraged by their department to enforce small infractions, such as marijuana possession, as this 'broken windows' approach is believed to discourage more serious crimes later on (Offman & Hui, 2014). Police officers in Vancouver, however, are given the prerogative to focus their efforts on more serious criminal offenses, rather than marijuana offenses (Offman & Hui, 2014). Implementation conversion might also differ across jurisdictions depending on the proportion of petty crime vs. violent crime; those jurisdictions with higher instances of violent crime may commit fewer resources towards non-violent drug crimes, thereby lowering their enforcement levels. Agency procedures may also lead to implementation conversion across jurisdictions, as British Columbia, Quebec, and New Brunswick require all criminal charges to be reviewed and approved by a crown prosecutor before charges are laid, rather than allowing police to charge individuals directly, a procedure known as 'charge approval' (Cowper, 2012). Rumored to be a way of reducing the number of criminal prosecutions, a charge approval process allows for an independent assessment of the evidence and charges (Bolan & Hager, 2014). This may increase the instances of implementation conversion, depending on whether the crown prosecutors are less likely to recommend charges than the police officer.

Implementation conversion can vary across jurisdictions because street-level bureaucrats may base their enforcement on departmental priorities and agency procedures unique to a jurisdiction. Implementation conversion may also occur across jurisdictions because of which level of government is directly administrating the law. The Constitution Act of 1867, section 91, outlines the division of power, allowing the federal government to determine criminal law, and the provinces to administer the law (Government of Canada, 2012). The provinces then grant

municipalities the right to provide and fund policing services themselves. Those municipalities who administer their own policing services are further removed from federal priorities and political ideology. Some municipalities on the other hand, contract their policing services to the RCMP, while some municipalities in Quebec and Ontario contract their provincial policing force. The RCMP, a federal police service, may align their policing practices with federal priorities, rather than municipal ones. If the federal government has taken a hard-line approach to drug offenses, but the municipality has not expressed the same sentiments, whether the police force in a jurisdiction is the RCMP may impact drug enforcement rates and thereby impact implementation conversion. Implementation conversion may occur across jurisdictions, depending on whether the federal, provincial or municipal government is administrating the law.

3.7 Conclusion

As this chapter has outlined, command-and-control regulations use the law to define criminal conduct and rely on enforcement by police departments and the judicial system (Rosenbloom, 2007). Policy conversion can occur when these policies are actively redirected to achieve ends that are different from their original purpose, without changing the formal rules (Hacker et al., 2013). As was highlighted however, implementation conversion may also occur less deliberately when the policy or institution relies on street-level bureaucrats to achieve its ends. These street-level bureaucrats may contribute to implementation conversion by focusing their enforcement efforts elsewhere, as driven by agency procedures, the type of police force present in a jurisdiction, or the type of crime occurring in a jurisdiction. To compare different enforcement agencies across jurisdictions requires the creation of a common measurement of enforcement rates, which will be described in the following chapter.

4.0 Methodology

4.1 Introduction

One of the main purposes of this thesis was to explore whether implementation conversion has been occurring across Canadian jurisdictions. To this end, implementation conversion was explored as a concept, and the possibility was raised that street-level bureaucrats were contributing to implementation conversion in a variety of ways. To explore this possibility and to examine the research questions that were posed in Chapter One, it is necessary to outline the scope of the data, the creation of the dependent variables, and the limitations of this data.

4.2 Dependent Variable Details

The examination of the research questions was undertaken using a quantitative analysis of publicly available data collected from Statistics Canada and other sources. The key variable of interest is the charge rate – the likelihood that the relevant law enforcement agency for a particular city will charge an individual for a particular offence, given that the incident has been resolved. The charge rate is calculated for four dependent variables, each of which will be analyzed separately: cannabis possession, cocaine possession, cannabis trafficking, distribution, and production (TDP), and cocaine TDP. The cocaine offenses are used as a control or comparator group, allowing for insight into whether implementation conversion has only occurred with cannabis offenses. The calculation of the charge rate allows for a glimpse into policing priorities at the local and national level, the presence of implementation conversion, and the possible factors that may have led to implementation conversion across jurisdictions.

The charge rate is determined from crime statistics collected by the Canadian Centre for Justice Statistics (a division of Statistics Canada) through the Uniform Crime Reporting Survey (UCR) with co-operation from the policing jurisdictions across Canada. The source of information for UCR scoring is the police occurrence report (The Canadian Centre for Justice Statistics, 2016). For an incident to be included in the UCR, and thus as a crime statistic, a police officer involved with the incident must have written and submitted a police occurrence report. The police

occurrence report acts as a template from which statistics for specific crimes are counted and submitted to the UCR.[4] The charge rate for an offense is calculated by the following formula:

$$\text{Charge Rate} = \frac{\text{number of annual incidents resolved with a charge}}{\text{number of annual incidents that are resolved}}$$

An incident is considered 'resolved' when at least one individual involved with the incident is either charged, or when the incident is deemed 'cleared otherwise' (Gauthier, 2016). 'Cleared Otherwise' includes a number of possible outcomes, including police discretion, diversion programs for young offenders, and whether the suspect was charged with more serious offenses related to the incident (The Canadian Centre for Justice Statistics, 2016). It is usually the individual officers' choice whether or not to submit a police occurrence report regarding an incident, as well as their choice to pursue charges regarding the incident.

The calculation of the charge rate in this thesis is a better mechanism for understanding the factors that affect police discretion than an alternate dependent variable, such as charges per capita. Charges per capita, by using population as the denominator, doesn't account for all the incidents where police officers report the crime but do not pursue charges. The charge rate, by including the total number of annual resolved incidents in the calculation, allows for an understanding of how police discretion may have changed over time, and will allow for an exploration of the factors that may influence police discretion.

The crime statistics data are available from 1998-2014, and the data set compiled for the thesis includes 49 Canadian cities. Twenty-nine of these cities are Census Metropolitan Areas (CMAs), while the remaining twenty cities are made up of smaller, more rural-based cities from across the provinces (although no smaller, rural-based cities were chosen from Prince Edward Island or Quebec).[5] These smaller cities were included to analyze and compare the enforcement practices of the Royal Canadian Mounted Police (RCMP) to municipal police forces. Thus, inclusion of

[4] In large urban cities, the police occurrence report is typically translated and submitted to the UCR survey by the central records division of a police department. In small cities and rural jurisdictions, this process is likely handled by the same police officer throughout.

[5] A Census Metropolitan Area consists of one or more neighbouring municipalities situated around a core, with a total population of at least 100,000 of which 50,000 or more live in the core (Statistics Canada, 2015c).

the rural data provides a more comprehensive picture of implementation conversion across the country.

The first step in the analysis is to examine implementation conversion – i.e., whether, where, and to what extent it is occurring across Canada. Once implementation conversion has been determined to be indeed occurring across Canadian jurisdictions, some of the factors that may contribute to implementation conversion will be explored by exploring the variation that exists across jurisdictions. This exploration is accomplished with a graphical analysis of the relationship between the charge rate and a set of explanatory variables; based on the results from this analysis a regression analysis was undertaken.

The explanatory variables used in the analysis include the police force operating in the city (Municipal police force or RCMP), the governing party (e.g., Liberal, Progressive Conservative, New Democratic Party) of the province in which the city is located, the governing party of the federal government (Conservative or Liberal), the minority/majority status of the provincial and federal governments in place, the population of the city, and the violent and non-violent crime severity index for the city. Additionally, to examine whether judicial procedures contribute to implementation conversion, the charge approval process operating in some provinces will be analyzed.

4.3 Limitations

The method in which UCR data is collected and assembled from police reports, as well as the information that is not present in the data, introduces some inherent limitations. Firstly, the 'number of annual incidents that are resolved' in each jurisdiction may be influenced by police officer discretion at the scene of the crime. Police officers are not required to file a police occurrence for every infraction that they witness, so if they come across an individual smoking cannabis, they may simply confiscate the cannabis, rather than expend resources and time to make an arrest. Secondly, some incidents may be labelled 'cleared by charge', even though an individual was never charged for the cannabis-related violation tied to the incident. The UCR describes the Continuing Offense Rule, which "…acknowledges that often in police work several violations can be tied together because they either happened in a sequential manner, they repeat

over time, or they are all part of a larger case" (The Canadian Centre for Justice Statistics, 2016, pg. 19). The UCR is also incident-based, not violation-based, which means that "…an incident may be "cleared by charge"…if a charge is laid in connection with any of the violations on that incident" (The Canadian Centre for Justice Statistics, 2016, pg. 17). Thereby, an incident could include several violations, including cannabis possession. If one of the violations attached to the incident is cleared with a charge, then any other violations attached to the incident could also be recorded in the UCR as a cleared incident.

For the results of this thesis to be meaningful, the impact of each factor that affects the charge rate has to be similar across all jurisdictions; in addition, the full set of factors that affect the charge rate have to be included in the analysis. To the extent that these requirements are not met, the resulting analysis and conclusions that are drawn from it may not be entirely accurate.

4.4 Summary of Methods

This thesis uses publicly available data from Statistics Canada, collected by police jurisdictions across Canada, to calculate a charge rate – the likelihood that the relevant law enforcement agency for a particular city will charge an individual for a particular offence, given that the incident has been resolved. The charge rate, by including the total number of annual resolved incidents in the calculation, is a better mechanism than charges per capita for allowing an exploration of the factors that may influence police discretion. The data set uses charge rates from 49 jurisdictions, and will include several explanatory variables, including the governing party of the province, population, the type of police force, and the violent and non-violent crime severity index for the city. Given our understanding of the data set and the calculation of the dependent variables, it will be important to understand the relationship that is likely to exist between the various explanatory variables and the charge rates.

5.0 Empirical Estimations and Questions

5.1 Introduction

Using the research questions as a guide, this thesis has explored cannabis' background and history in Canada, the literature surrounding policy implementation and policy conversion, as well as the methodology that will be used in the analyses. Before an empirical analysis can be undertaken on the data, the chapter will explore the likely relationships between the various explanatory variables and the charge rates of the drug offenses. This will be done by using previous research and logic to understand the empirical relationships that are likely to exist between the dependent variable and the explanatory variables.

5.2 Year (1998-2014)

Over the past three decades, Canadian society has become increasingly tolerant of casual cannabis use among individuals. A 2014 poll found that nearly 60% of Canadians support the legalization of cannabis (Angus Reid Global, 2014), which has climbed nearly 30% in the past 20 years (Grenier, 2013). This gradual softening of public opinion and perception was reflected in the Liberal governments' announced legislation, which aims to legalize recreational cannabis use by July 2018 (Kirkup, 2017). Even before the proposed legislation, changing public attitudes surrounding cannabis and previous attempts by the federal government to decriminalize cannabis possession likely sent strong signals to police jurisdictions across Canada that enforcing the crime of cannabis possession is increasingly less in the public's interest, and that other offenses should be prioritized in pursuing criminal charges. For these reasons, it is expected that, all else the same, there will be a downward trend in the charge rate for cannabis possession over the time period in question. In the context of the empirical analysis that will be carried out in subsequent chapters, the expectation is that there will be a negative relationship between the charge rate and the variable Year. The variable Year, which takes on values from 1998 to 2014, is a proxy variable that is meant to capture a set of behaviours that are the underlying cause of declining charge rates.

The other dependent variables – cannabis TDP, cocaine possession, and cocaine TDP – have not become significantly more tolerated by society during the observed time period. Cocaine use is likely perceived as highly risky, while supply-based cannabis and cocaine offenses are likely seen as enabling drug use. Police-reported cocaine offenses (both possession and TDP) have increased since 1998, but fallen from their peak in 2007, while cannabis TDP offenses per capita have remained constant (Cotter, Greenland, & Karam, 2015). Given these trends, police departments and officers have no overt reasons to become more tolerant towards these offenses. We would thereby expect consistent charge rates across the observed time period for these three dependent variables, all else being equal.

5.3 Population Size

No previous studies were found that link population size to enforcement practices. However, it is expected that population size could affect the resources available to police departments. Cities with large populations can spread the fixed costs of policing among a larger tax base. Thus, large-urban cities may have more resources available for pursuing charges and may apply different priorities to their policing than smaller cities. Cities may pursue charges for less severe crimes more frequently as a means of discouraging more serious crimes in the future. Regardless, decisions of whether to pursue charges are made in the context of limited resources and differing views of enforcement priorities. Given the lack of any previous studies, the determinants of this trade-off will thereby be posed as an empirical question; the sign on this coefficient is to be answered by the analysis.

5.4 Police Force

In Canada, all three levels of government have public-sector police forces: municipal police, provincial police, and The Royal Canadian Mounted Police (RCMP). Municipal police forces have been given the constitutional jurisdiction by their province to provide their own policing services (House of Commons Committee, 2012), and are administered and funded in full by their city. The RCMP is Canada's national police service, providing policing services at the federal level, and also on a contract basis for all of the Canadian territories, eight provinces, and over

150 municipalities (RCMP, 2013), thereby serving approximately 15% of Canadians (House of Commons Committee, 2012). The Ontario Provincial Police (OPP) is a provincial police force, that, similarly to the RCMP, provides policing services to municipalities and regions in Ontario that cannot provide them on their own. The central difference between the RCMP and the OPP is that the municipalities in Ontario who contract with the OPP are required to pay for the full cost of policing themselves, while the federal government pays for between 10-30% of the RCMP costs when municipalities require them (House of Commons Committee, 2012). For the analysis in this thesis, any jurisdiction policed by the OPP will be labelled as a 'municipal police force', given that both municipal police forces and provincial forces are fully funded by their own city, unlike the RCMP which receives part of its funding from the federal government.

It is expected that jurisdictions policed by the RCMP will have higher charge rates than municipal police forces for all the dependent variables. Since no known study has examined whether differences exist in the policing practices between the RCMP and municipal forces, this expectation is built on the following logic. Firstly, the RCMP are more likely to service rural-based populations than municipal police. According to one study, these rural-based populations are more likely to vote for conservative governments (Roy, Perrella, & Borden, 2015), and conservative voters in a jurisdiction may imply a bias towards stricter enforcement of drug offenses. Secondly, the RCMP, being a federal police service, may align their policing practices with federal priorities, rather than municipal priorities. Both Liberal and Conservative federal parties were in power from 1998-2014, and while Liberal governments believed that harsh punishments do not deter crimes and that criminal justice polices should be crafted by experts (Doob & Webster, 2015), the Conservative governments oversaw the creation and implementation of a number of 'tough-on-crime' criminal justice policies during their tenure (Kerr & Doob, 2015). This tough-on-crime stance may have affected the enforcement practices of the RCMP, given that the federal minister responsible for this department provides direction to the RCMP (House of Commons Committee, 2012). Municipal police forces are more insulated from these federal priorities and political ideologies, as they are funded by the municipality and are therefore more likely to align their policing practices with the priorities of the municipality. Some municipalities may have similar enforcement rates to the RCMP, but overall, the RCMP jurisdictions can be expected to have higher rates of enforcement, all else the same.

5.5 Provincial Government Parties

In Canada, provincial governments have been formed by five different parties during the period of 1998-2014, all with different ideological beliefs and policy priorities, many of which mirrored the parties at the federal level. Many of the issues that these parties have campaigned on are regional issues and specific to the provincial circumstances at the time. The New Democratic Party (NDP) is the most left-leaning of the provincial parties, occupying the centre-left of the political spectrum, and encouraging policies that expand the social safety net for citizens (McCullough, 2016). Progressive Conservative (PC) parties often mirror the values of their federal counterpart, the Conservative Party of Canada, as do the provincial Liberals. The Saskatchewan Party has governed the province of Saskatchewan since 2007, and is a coalition of Liberal and Conservative supporters (McCullough, 2016). The Parti Quebecois (PQ), who governed in Quebec from 1998-2003, and 2012-2014, ran on a platform of separation from the rest of Canada and provincial sovereignty (McCullough, 2016). Although the same parties do not align perfectly along ideological lines across provincial boundaries, many of their beliefs and values are consistent across the country.

Although some provincial governments might be more ideologically aligned with a tough-on-crime criminal justice platform (such as the Saskatchewan Party and PC parties), provincial governments have little ability to control the actions and discretion of police departments in their municipalities. Firstly, policing responsibilities have been largely delegated to municipalities by the provinces (House of Commons Committee, 2012), thereby providing a buffer between provincial government ideology and municipal police boards. Secondly, Section 91 of the Constitution Act of 1876 provides jurisdiction to the Federal Government over criminal law (Government of Canada, 2012), which gives the provincial governments fewer opportunities to send signals to police departments about their preferred enforcement practices. Thirdly, there was no evidence to be found which suggested that provincial conservative parties made criminal justice and policing a centerpiece of their time in government. For these reasons, it is expected that there will be no observed difference between enforcement rates and the provincial party in power throughout the observed time period, all else being equal.

5.6 Federal Government: Liberal vs. Conservative

The two main governing parties in Canadian federal politics are the Liberals and the Conservative Party of Canada. The Liberals, who governed from 1993 to 2006, were fiscally conservative and socially progressive; they championed balanced budgets and eliminating the budget deficit during their time in power, while legalizing same-sex marriage and supporting popular social programs (McCullough, 2016). Along the political spectrum, the Liberals occupy the centre-left of the political spectrum. The Conservative Party of Canada, who governed from 2006 to 2015, "favours low taxes, smaller, less intrusive government, a strong regime of law-and-order, a strong military and respect for traditional values" (McCullough, 2016). The Conservatives are generally thought to be on the centre-right of the political spectrum. Both parties instituted criminal justice policies while in power, but only the Conservatives made it a centerpiece during their time in government.

The differences between the Liberals and the Conservatives in their attitude towards drug offenses and criminal justice polices while in government were quite clear. During the Liberal reign, Prime Minister Jean Chretien proposed two bills to decriminalize cannabis possession (Raaflaub, 2004), and spoke out in favor of changing cannabis possession laws (Fischer et al., 2003). The Liberal belief towards crime and justice polices was that harsh punishments do not deter crime, and that the development of criminal justice policy should be crafted by experts (Doob & Webster, 2015). During the Conservative Party's time in power, a number of 'tough-on-crime' criminal justice policies were enacted (Kerr & Doob, 2015); these policies were a reflection of a belief that crime can be reduced through harsher punishments (Doob & Webster, 2015). It is expected that these policy initiatives sent a signal to municipal police departments and the federally directed RCMP that they expect individuals to be punished for crimes. Or, as Prime Minister Stephen Harper himself stated in 2014, 'do the crime, do the time' (Doob & Webster, 2015). For these reasons, it is expected that the enforcement rates will be higher for all the dependent variables while the Conservative Party was in power, all else being equal.

5.7 Crime Severity Index – Violent and Non-Violent

The Crime Severity Index (CSI) is published by the Canadian Centre for Justice Statistics and Statistics Canada, and tracks "changes in the severity of police-reported crime by accounting for both the amount of crime reported by police in a given jurisdiction and the relative seriousness of these crimes" (Statistics Canada, 2015a). The seriousness of crimes is calculated by assigning a weight, or value, to each type of offense. The weights are derived from the average incarceration sentences across all Canadian provinces and territories, and are updated every five years (Statistics Canada, 2015a). More serious offenses are given higher weights, while relatively minor offenses are given smaller weights.[6] The CSI is then calculated by multiplying the number of police-reported incidents in a jurisdiction for a given offense by the offense weight, and then dividing that total by the corresponding population of each jurisdiction. The CSI can be broken down into two separate indexes – the Violent Crime Severity Index (V-CSI) and the Non-Violent Crime Severity Index (NV-CSI), both of which will be analyzed in turn.

A high value of the V-CSI in any jurisdiction could bring about several changes to the dependent variables. A jurisdiction with a high V-CSI (300-400) could petition their municipality for increased police resources, resulting in more officers and a greater likelihood that those officers will expend their time and police resources on drug charges. A high V-CSI value may also encourage police departments to charge all crimes at a higher rate, including drug crimes, to discourage crime in general. Alternatively, a jurisdiction with a high V-CSI value could instead encourage their police department to focus on expending officer time and department resources on violent crimes, rather than non-violent drug crimes. Given the absence of empirical research on the effects of the V-CSI on policing in Canadian jurisdictions, and the differing viewpoints outlined above, the effect of the V-CSI on the dependent variables will thereby be posed as an empirical question in the analysis of the data.

High values of the NV-CSI in any jurisdiction may also bring about different changes to the dependent variables. A jurisdiction with a high NV-CSI may indicate a higher incidence of drug crimes, which may have led to the creation or expansion of a specialized drug crime unit within

[6] Some examples of weights for the Crime Severity Index: Murder (1st and 2nd degree) – 7042, Manslaughter – 1822, Robbery – 583, Breaking and Entering – 187, Theft over $5000 – 139, Mischief – 30, Failure to Appear – 16, Cannabis Possession – 7 (Statistics Canada, 2015b).

the police department. Such a unit would be likely to increase the charge rate for the dependent variables of any jurisdiction. Conversely, a high NV-CSI could also be the result of different reporting practices for high volume, non-violent crimes between jurisdictions, without having impacted the charge rate of the dependent variables. Owing to the lack of empirical and theoretical research on the effects of the NV-CSI on policing in Canadian jurisdictions, and the differing hypotheses outlined, the effect of the NV-CSI on the dependent variables will also thereby be posed as an empirical question to be answered in the resulting analysis.

5.8 Charge Approval Process and Judicial Practices

In Canada, most police departments, except for those in British Columbia, New Brunswick, and Quebec, are responsible for collecting and reviewing evidence against a suspect, and then deciding whether that individual should be charged with a crime. Once the decision is made to charge an individual, the supporting evidence is forwarded to the province's crown prosecutor, who then begins proceedings. However, British Columbia, New Brunswick, and Quebec employ a different procedure, known as 'charge approval' (Cowper, 2012) . The charge approval process requires that all criminal charges be reviewed and approved by a crown prosecutor before charges are laid, rather than allowing police departments to charge individuals directly (McCuaig, 2012). The charge approval process makes it less likely that the decision to charge an individual will be emotionally motivated, or driven by personal biases, as it allows highly trained and specialized crown prosecutors to determine whether it is in the public interest that a suspect is charged (McCuaig, 2012), and allows for an independent assessment of the evidence and charges (Bolan & Hager, 2014). British Columbia is also unique in that, since 1983, the Attorney General's Department has required that there be a 'substantial likelihood of conviction' before charges can be laid, rather than the 'reasonable likelihood' that exists in other Canadian provinces (McCuaig, 2012). The crown prosecutor thereby performs a quasi-judicial function, by deciding whether the 'substantial' threshold was met. The use of the word 'substantial' was purposeful in its intent to require a stricter test than 'reasonable'. It has been estimated that the use of the word 'substantial' raises the evidentiary threshold to 90%, whereas the reasonable standard is approximately 75% (Bolan & Hager, 2014).

When charges are forwarded to the respective crown prosecutors' office for review when a charge approval is in place, the police officer involved is signalling that their intention is to pursue charges related to the incident; the incident meets their minimum threshold for available evidence and whether it is in the public interest to charge the suspect. The crown prosecutor in this case can either (1) approve the charges, or (2) refuse to approve the charges. In the absence of a charge approval process, the police officer was already going to pursue charges, so the crown prosecutor cannot increase the number of incidents that will be resolved with a charge. By refusing to approve the charges, the crown prosecutor can, however, lower the number of incidents that are resolved with a charge. For these reasons, it is expected that jurisdictions with a charge approval process will have either lower charge rates, or the same charge rates, as jurisdictions without a charge approval process, all else being equal. In addition, British Columbia, because of its 'substantial' evidentiary threshold, is expected to have the lowest charge rates across all the dependent variables.

5.9 Minority vs. Majority Government

In Canada's parliamentary system, it is possible that the first-past-the-post electoral system at the provincial and federal level will result in a plurality vote; the winning party receives more votes than any other competing party, but does not receive a majority of the votes. In this case, a majority government can still be formed if the party won a majority of the seats in the House of Commons or their provincial legislature. If the party did not win a majority of the seats in the House of Commons or the provincial legislature, they can still form a minority government, as long as they can command the confidence of the House of Commons, or the Provincial Legislature, by working alongside and maintaining the approval of other parties and independents (Azzi & Kwavnick, 2012). Canada's electoral system results in relatively few minority governments being formed, although there have been minority governments at the federal level, and in the provinces of Nova Scotia, Quebec, Ontario, and Saskatchewan during the years 1998-2014 (Wikipedia, 2016).

Majority governments have more power and precedence to bring about policy change and establish policing priorities than minority governments. Minority governments are relatively rare in Canada, and therefore parties are not used to working together to bring about policy change

and establish priorities. Indeed, Canada has been seen as a 'laggard' when it comes to making minority governments work effectively (Shane, 2010), and the federal minority governments in 2004 and 2006 were seen as excessively partisan (Good, 2010). The ability of federal and provincial minority governments to establish either formal or informal policing priorities is weakened when the government has to ensure coalition building in order to enact policy changes. Additionally, minority governments are less likely to send the requisite signals to influence policing priorities at the local level, or adjust criminal justice policies to reflect the desired enforcement rates, because of their perceived lack of power and the requirement to focus on fewer party-led priorities as a minority government. Majority governments on the other hand, are less likely to be challenged by opposition parties (Good, 2010), and can therefore govern more freely. However, these features of minority and majority governments do not hint at their governments' preference for either more severe or less severe criminal justice policy. Additionally, as noted earlier, provincial governments have little power to control the actions and priorities of municipal police forces. For these reasons, this thesis will presume the effect of minority governments as an empirical question to be answered by the analysis.

5.10 Conclusion

This chapter has explored the likely relationships between the dependent variables and the explanatory variables, using previous studies and logic to determine the likely connection. The explanatory variables that were explored included population size, the violent and non-violent CSI, the type of police force, whether the governing party formed a majority or minority government, the provincial governing party, and the federal governing party. The next chapter will conduct a graphical analysis to assess the likely relationships that were made between these variables, and to begin to answer the research questions that were posed in chapter one.

6.0 Graphical Analysis

6.1 Introduction

The purpose of chapter one was to introduce the topic of examination, and to introduce the central research questions that would drive the analysis of the data. In the previous chapter, the likely relationships between the dependent and independent variables were investigated. The purpose of this section is to visually examine one or two variables at a time, to see if the anticipated relationships hold, and to begin to answer the central research questions.

The first research question aims to look at whether implementation conversion is taking place across jurisdictions in Canada. Implementation conversion is a mechanism through which the outcomes of policy change through the collective actions of street-level bureaucrats. This shift in the policy outcomes is not thought to be the deliberate choice of a centralized policy actor, but instead occurs when the policy outcomes depend on decentralized implementation and enforcement. The formal policy remains stable, but its impact is transformed through its redirection or re-interpretation. The graphical analysis of the data carried out in this section examines whether the policy of cannabis criminalization and enforcement has undergone a change. The presence or absence of implementation conversion is measured by examining the charge rates over time in the observed Canadian jurisdictions for cannabis possession and for trafficking, distribution, and production (TDP). These rates can be observed from different perspectives – from a national or provincial perspective, and at the more local jurisdictional level. Cocaine charge rates will also be observed alongside the cannabis charge rates to determine whether implementation conversion is occurring across different drug offenses.

6.2 Implementation Conversion – National Trends

Nationally, cannabis possession has experienced significant declining charge rates compared to the other drug offenses. As Figure 6.1 shows, only cannabis possession charge rates declined by more than 10% throughout the observed period, as compared to the other drug offenses. The national median charge rate for cannabis possession declined from 79% in 1998 to 49.5% in

2014, representing a decline of 37.2% over 17 years.[7] This drop in the charge rate for cannabis possession is policy significant, as the decline in the cannabis possession charge rate was much more rapid than the gradual decline observed in the other drug offenses. Of note, is the period 2002-2003; the national median charge rate for cannabis possession declined from 74.5% to 59%, a 20.6% decline over one year. This drop in the charge rate was likely influenced by the Liberal governments' attempts to decriminalize cannabis possession in 2002 and 2003. Table 6.1 summarizes the percentage change from 1998 to 2014 of the national median charge rates (labelled as 'Canada') for each drug offense, and demonstrates that cannabis TDP (3.4%), cocaine possession (7.7%), and cocaine TDP (1.4%) all declined over time by much smaller margins as compared to cannabis possession (37.2%). The time trend for cannabis possession is statistically significant at the 99% level. None of the time trends for the other offenses were statistically significant.

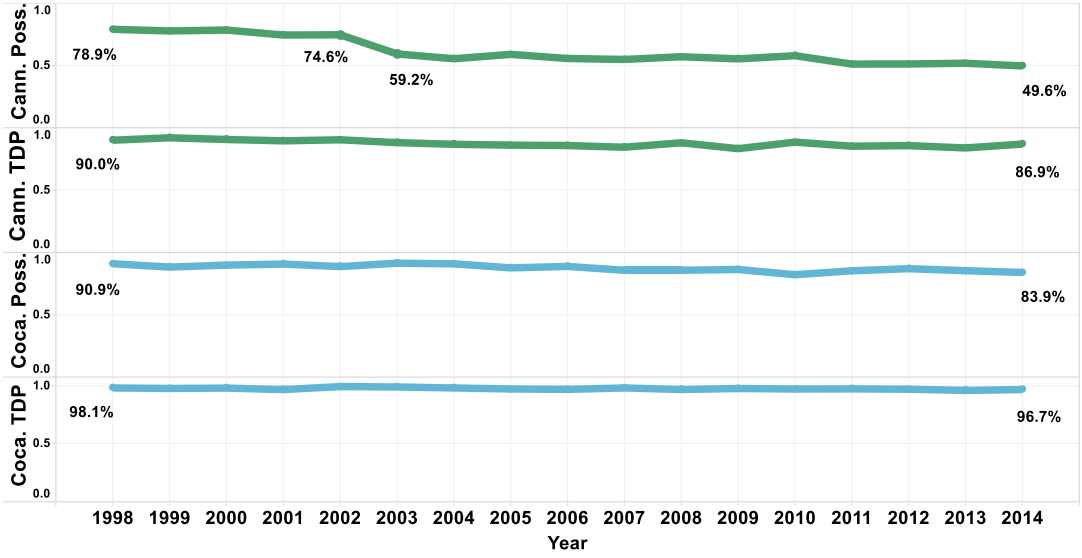

Figure 6.1 – National Median Charge Rates – Cannabis and Cocaine Offenses

[7] Each median value in this graphical analysis considers all the charge rates from each jurisdiction in one year, and represents the middle value of this data set. By using the median value instead of the mean, this analysis is less likely to be skewed by abnormally high or low charge rates.

Table 6.1: Median Charge Rates over time

	Cannabis Possession				Cocaine Possession			
	1998	2014	% Change	Significance	1998	2014	% Change	Significance
Canada	78.9%	49.6%	**-37.2%**	***	90.9%	83.9%	**-7.7%**	*
Alberta	80.7%	21.2%	**-73.7%**	***	98.8%	76.0%	**-23.1%**	***
British Columbia	23.7%	24.2%	**2.2%**	***	69.3%	36.4%	**-47.5%**	
Saskatchewan	85.7%	54.7%	**-36.2%**	***	100.0%	97.3%	**-2.7%**	
Manitoba	95.4%	50.0%	**-47.6%**	***	98.9%	88.2%	**-10.9%**	
Ontario	79.5%	47.0%	**-40.9%**	***	90.9%	89.9%	**-1.1%**	
Quebec	68.4%	60.1%	**-12.2%**	***	88.2%	88.8%	**0.7%**	
Newfoundland	84.7%	49.2%	**-41.9%**	***	N/A	N/A	**N/A**	
Nova Scotia	69.5%	39.3%	**-43.4%**	***	97.6%	68.3%	**-30.0%**	***
New Brunswick	95.5%	52.9%	**-44.6%**	***	100.0%	76.7%	**-23.3%**	*
	Cannabis TDP				**Cocaine TDP**			
	1998	2014	% Change	Significance	1998	2014	% Change	Significance
Canada	89.9%	86.9%	**-3.4%**	**	98.1%	96.7%	**-1.4%**	
Alberta	90.2%	90.9%	**0.8%**	**	91.2%	94.4%	**3.6%**	
British Columbia	73.5%	56.0%	**-23.8%**	*	98.2%	89.8%	**-8.5%**	**
Saskatchewan	94.9%	87.6%	**-7.8%**		97.1%	100.0%	**3.0%**	
Manitoba	100.0%	98.4%	**-1.6%**		99.1%	98.4%	**-0.7%**	
Ontario	87.8%	83.3%	**-5.1%**		98.1%	98.2%	**0.1%**	**
Quebec	87.2%	91.8%	**5.3%**		98.3%	94.0%	**-4.4%**	
Newfoundland	92.9%	50%	**-46.2%**	***	N/A	N/A	**N/A**	
Nova Scotia	88.8%	85.1%	**-4.1%**		96.8%	87.5%	**-9.6%**	*
New Brunswick	92.9%	71.3%	**-23.2%**	***	66.7%	100.0%	**50.0%**	**

Level of Significance: ≤10% = *; ≤5% = **; ≤1% = ***

Sign = coefficient of the trendline

The level of significance column was determined by assessing the P-value from each provincial trendline. The trendline was from a regression of the charge rates for all the jurisdictions in a province on a time variable. The level of significance indicates the probability that the equation of the trendline, and thereby the model, was a result of random chance.

6.3 Implementation Conversion – Provincial Trends

As both Table 6.1 and Figure 6.2 highlight, all the provinces, (except for British Columbia, whose change was positive) experienced large and statistically significant declining charge rates for cannabis possession. The remaining drug offense charge rates declined by much smaller margins over time. Table 6.1 summarizes the median charge rates of all provinces in 1998 and 2014, as well as the percentage change that occurred between these two points in time. All the provinces, except for British Columbia and Quebec, had their charge rate for cannabis possession decline by more than 36%. Cocaine possession charge rates have also declined in most jurisdictions, although by much smaller margins. Table 6.1 also shows that the TDP offenses among the provinces also tended to decline by small margins over time, the exceptions being British Columbia, Newfoundland and Nova Scotia, whose charge rates declined by larger margins. Of note is British Columbia, which is the only province to have increased their charge

rate for cannabis possession, and whose charge rates for cannabis and cocaine possession, and cannabis TDP in 1998 were much lower than any other province.

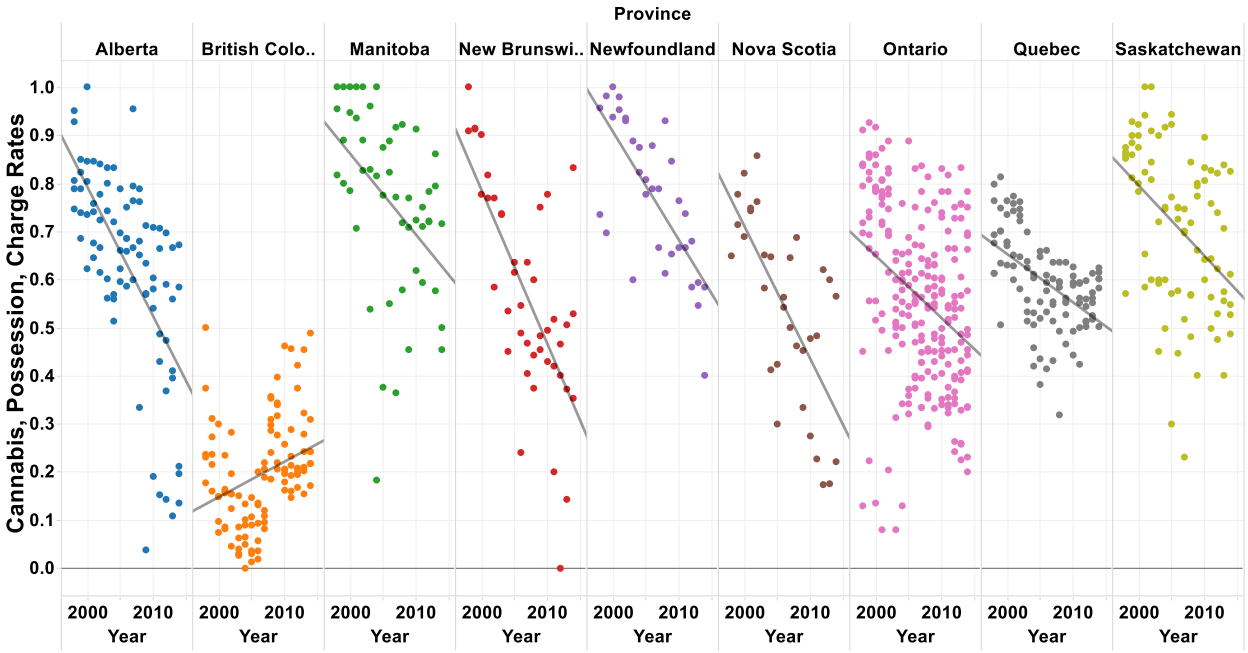

Figure 6.2 – Provincial Scatterplot of Cannabis Possession Charge Rates

6.4 Implementation Conversion – Jurisdictional Trends

An examination of implementation conversion from a jurisdictional perspective reveals that many cities have seen their cannabis possession charge rates decline significantly since 1998. Table 6.2 shows that 32 out of the 49 examined jurisdictions had a statistically significant decline in their charge rates for cannabis possession since 1998, while 39 of the 49 jurisdictions saw declining trendlines (see Appendix A.1 for a full list of all cities). Cannabis TDP meanwhile, saw 42 of the 49 jurisdictions with declining trendlines, 14 of which were statistically significant declines.[8] It should be noted that most of the cities with increases in the charge rates for cannabis possession were in British Columbia, again revealing British Columbia to be an outlier among the provinces.

[8] Statistical significance was determined by running a regression of the charge rates for each jurisdiction on a time variable, and then examining the P-value of the trendline for each jurisdiction.

Table 6.2 – Number of Jurisdictions with a Significant Change to their Charge Rate

	Cannabis Possession	Cocaine Possession	Cannabis TDP	Cocaine TDP
Significance level of 99%	21	6	5	3
Significance level of 95%	8	5	6	3
Significance level of 90%	3	2	3	2
Number of Jurisdictions with Declining Trendlines	39	29	42	23

6.5 Implementation Conversion – Graphical Conclusion

These graphical representations and statistical summaries help to convey how many of the cities and provinces in the data set have seen declines in cannabis possession enforcement since 1998. Thus, we can conclude that implementation conversion has occurred most noticeably among cannabis possession, across many of the Canadian jurisdictions.

In chapter one, a second research question was posed - if there is not equal enforcement across jurisdictions over time, what are some of the factors that affect police officers' decisions to charge an individual for a drug crime? The previous analysis found that there is some variation in how police officers in jurisdictions choose to charge for drug offenses, especially with cannabis possession. Thereby, the analysis that follows will explore the variation that exists between jurisdictions to determine, when possible, which variables affect the charge rates of the examined drug offenses.

6.6 Population

An examination of population against the charge rates, using a simple graphical analysis, does not adequately convey meaningful results. Since the population in most jurisdictions has been increasing over time, it is difficult to discern graphically if population by itself is having an effect, as the visible effect could be the result of growing populations over time. Thereby, to determine the differential impact that time and population might have on the charge rates, it is necessary to use regression analysis. The question as to whether population has any effect on the charge rate of a jurisdiction will be examined in the next chapter.

6.7 Police Force

An examination of the Police Force variable begins with Figure 6.3, which shows the median charge rates over time for cannabis and cocaine possession, separated by Police Force. The RCMP are shown to have lower charge rates than municipal police for possession. However, the province of British Columbia was found to have significantly lower charge rates among its jurisdictions for all drug offenses other than cocaine TDP, and British Columbia has several of the RCMP policed jurisdictions in this analysis. Thus, including British Columbia in the analysis of police force weights the charge rates of the RCMP noticeably downwards for cannabis and cocaine possession. Thereby, the impact of British Columbia needs to be separated out from the analysis. In Figure 6.4, the province of British Columbia is excluded from the analysis, resulting in charge rates for possession offenses that are more closely aligned between the police forces. Again, British Columbia was found to be an outlier that affected the resulting analysis.

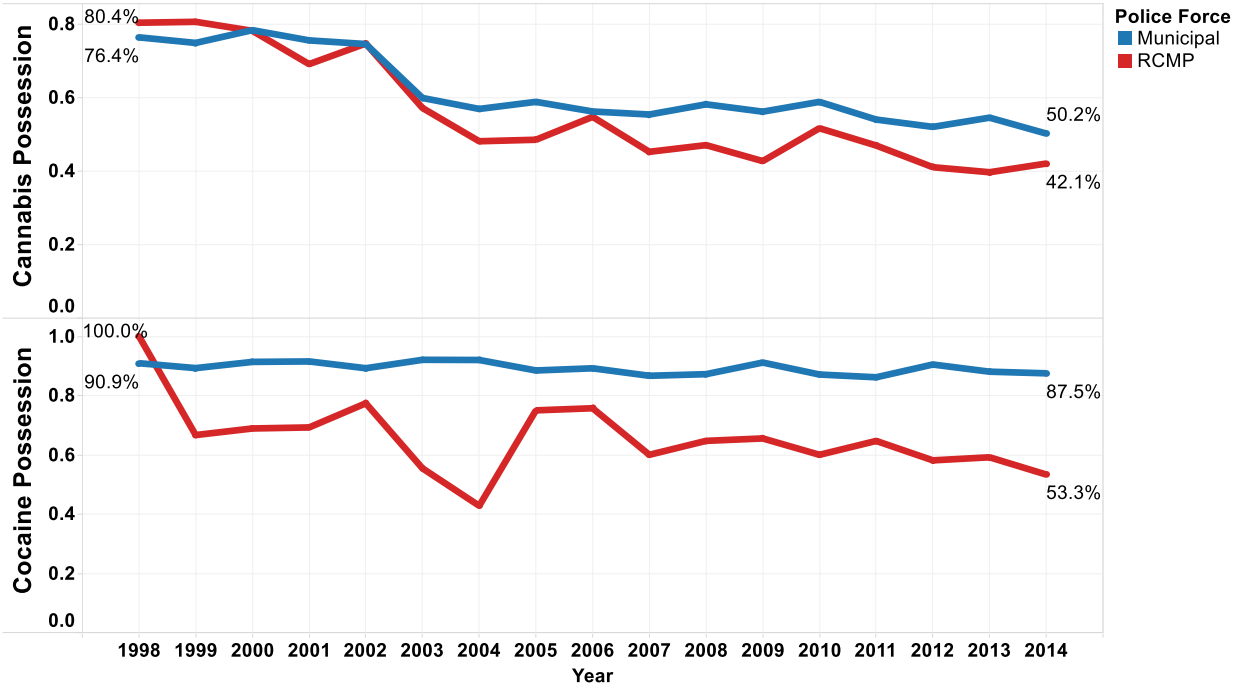

Figure 6.3 – Median Charge Rate for Possession by Police Force, including British Columbia

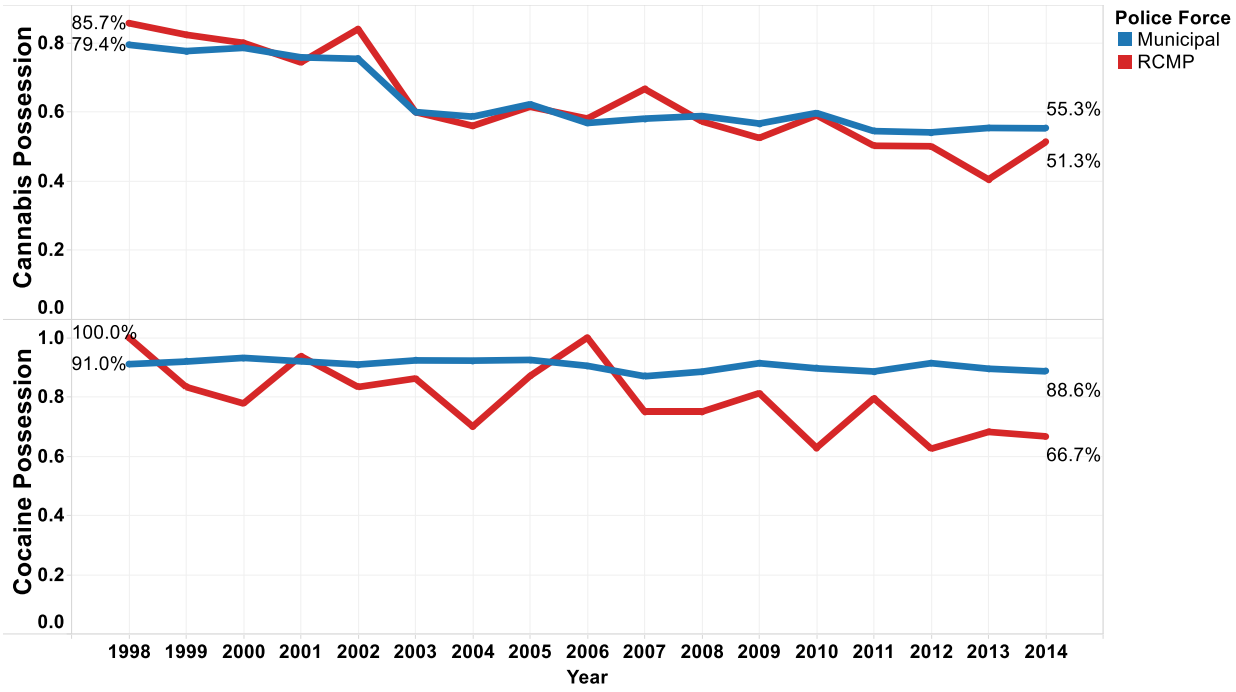

Figure 6.4 – Median Charge Rate for Possession by Police Force, excluding British Colombia

6.8 Provincial Party

The graphical analysis of the provincial parties begins with a look at the median charge rates over time, colored by provincial party. Two of the provincial parties, Parti Quebecois and the Saskatchewan Party are each represented in only one province. The Saskatchewan Party is mostly comprised of former Progressive Conservatives, and aligns their political ideology with conservatism. Thereby, the Saskatchewan Party will be labelled as Progressive Conservatives for the proceeding analysis. Parti Quebecois has historically held Quebec sovereignty as one of their primary political motivations. Parti Quebecois only governed for a portion of the observed time period, resulting in an incomplete analysis. As such, they will thereby be excluded from the analysis. The NDP is mainly represented through the provinces of Manitoba and Saskatchewan, the Liberals in British Columbia, Ontario and Quebec, and the PC in Alberta, Ontario, and Saskatchewan.

As the graphical analysis shows, the charge rates for all drug offenses were similar under different provincial parties, except for a few years in the early 2000s. Figure 6.5, which examines cannabis and cocaine possession, shows that from 2004 – 2014, the provincial parties exhibited

charge rates that were similar to one another, and displayed little variability over time. The same results can be found in Figure 6.6, which examines cannabis and cocaine TDP. Most of the variation present from 1998-2004 is a result of Liberal parties, who in 2001 governed with the highest median charge rate for cannabis possession amongst provincial parties (97%), and then two years later, the lowest median charge rate for cannabis possession amongst the provincial parties (7%). However, these extreme values are the result of provincial outliers; Newfoundland was the only Liberal governed province in 2001, and in 2003 the Liberal Party was overrepresented in British Columbia in the data set. Newfoundland had some of the highest cannabis possession charge rates in the country in 2001, while British Columbia already had the lowest charge rates for cocaine and cannabis possession when the Liberals came into power in 2002. Thereby, this blip in the data is explained by provincial factors and not party factors. Appendix A.2 and A.3 illustrates this point by showing how the median charge rates of Liberal governments for cannabis and cocaine possession were more closely aligned in 2002 and 2003, when British Colombia is excluded from the analysis. Overall, this analysis shows that charge rates for possession amongst provincial parties have displayed little variability over time, and that charge rates in British Colombia were shown to have been outliers.

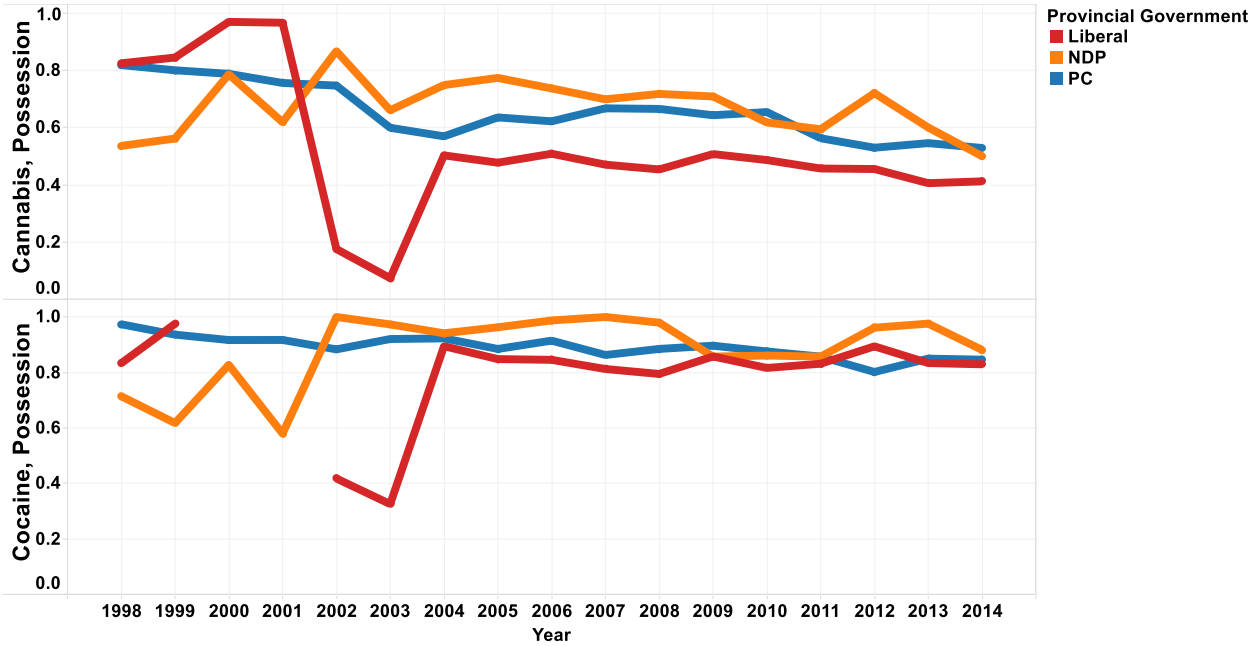

Figure 6.5 – Median Charge Rates of Cannabis and Cocaine Possession by Provincial Party

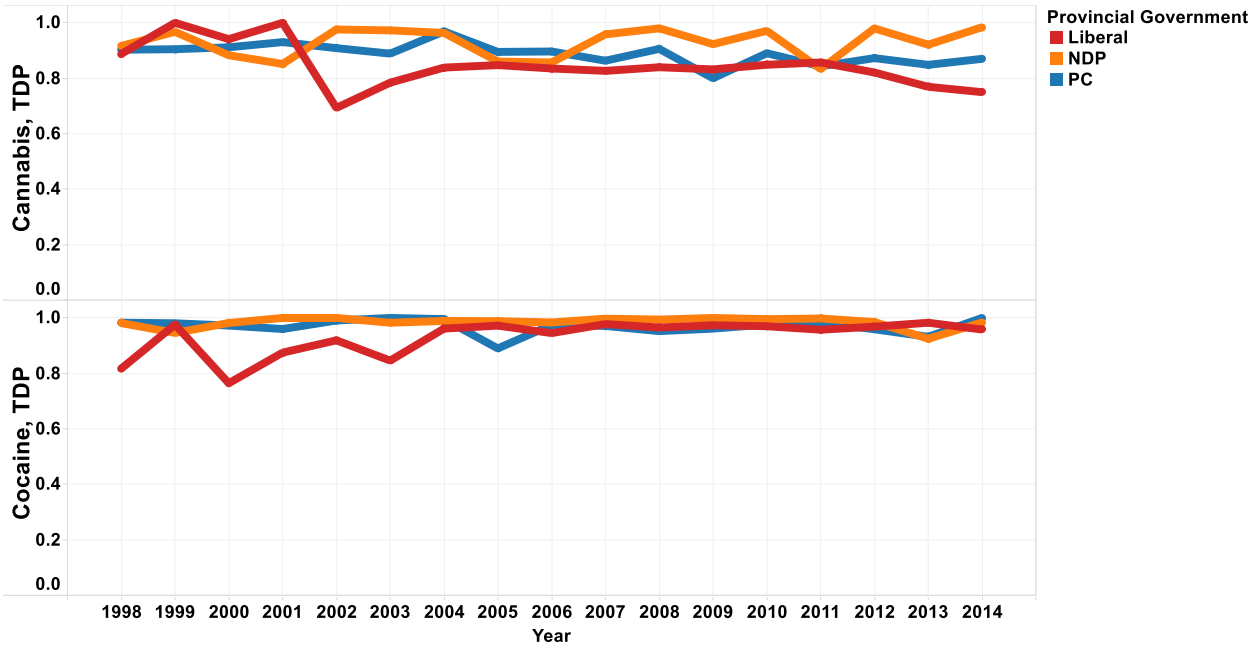

Figure 6.6 – Median Charge Rates of Cannabis and Cocaine TDP by Provincial Party

6.9 Federal Party

The graphical analysis of the federal parties reveals the impact that a federal party has on charge rates. Figure 6.7 depicts the national median charge rate for cannabis possession in every year, colored by the federal party. This was the only drug offense to show any distinct variability over time. In Figure 6.7, two distinct periods can be observed: 1998-2002 when the median likelihood of a charge was between 79%-75%, and 2003-2014 when the median likelihood of a charge was 50-59%. The sudden and sustained drop in the charge rate from 2002-2003 was likely caused by the Liberal government attempts to decriminalize cannabis possession in the early 2000's. Although these efforts were ultimately unsuccessful, they may have sent a strong signal to police departments across Canada that the federal government did not think of cannabis possession as an enforcement priority.

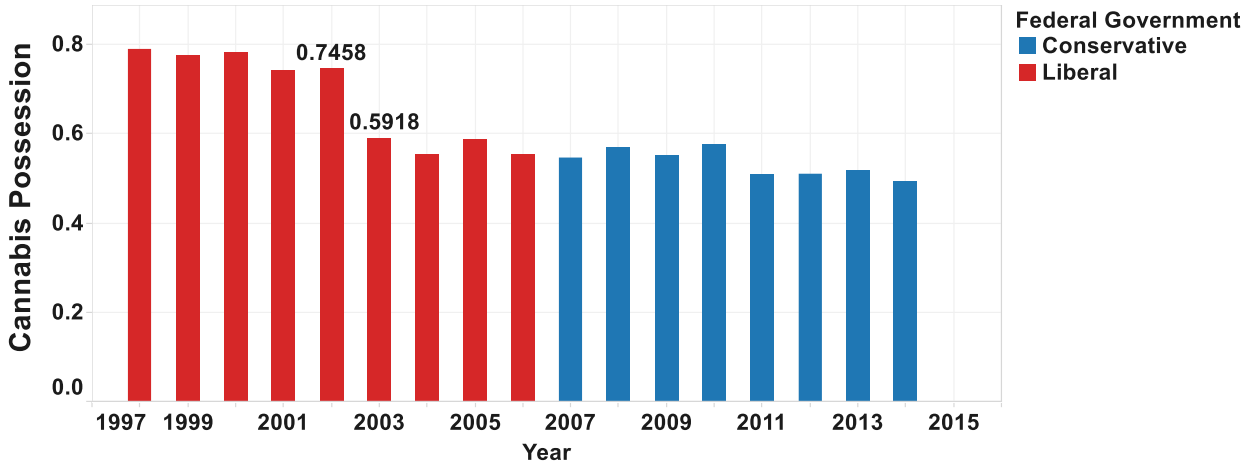

Figure 6.7 – National Median Charge Rate by Federal Party

6.10 Non-Violent Crime Severity Index

The analysis of the Non-Violent Crime Severity Index (NV-CSI) on the charge rates of the provinces reveals that there are few observable relationships occurring. Table 6.3 summarizes the sign of the coefficient and the significance level of the trendline for each provinces' NV-CSI scatterplot. As Table 6.3 shows, there is little consistency among each of the drug offenses; there is neither a positive nor negative relationship between the charge rate and the NV-CSI occurring among the provinces. Many of the statistically significant relationships occurred with cannabis possession; five of the nine provinces were statistically significant at the one percent level. However, these statistically significant relationships for cannabis possession were positive trendlines for some provinces, and negative trendlines for other provinces. Cocaine TDP recorded four statistically significant relationships among the provinces, while cocaine possession, and cannabis TDP each had three. Manitoba was the only province to have at least three statistically significant relationships among the drug offenses, and each sign of their coefficient was negative for every drug offense.

Table 6.3 – Non-Violent CSI Sign and Significance by Province

	Cannabis Possession		Cocaine Possession	
Province	Sign	Significance	Sign	Significance
British Colombia	-	***	-	
Alberta	+		-	
Saskatchewan	-	***	-	***
Manitoba	-	***	-	
Ontario	+	***	-	**
Quebec	+	***	+	
New Brunswick	+		+	
Nova Scotia	+		+	
Newfoundland	+		+	*
	Cannabis TDP		**Cocaine TDP**	
Province	Sign	Significance	Sign	Significance
British Colombia	-		+	
Alberta	+		-	
Saskatchewan	-		-	
Manitoba	-	**	-	**
Ontario	+		-	**
Quebec	-		+	**
New Brunswick	+	***	-	***
Nova Scotia	-	***	+	
Newfoundland	+		+	

Level of Significance: ≤10% = *; ≤5% = **; ≤1% = ***

Sign = coefficient of the trendline

6.11 Violent Crime Severity Index

The analysis of the Violent Crime Severity Index (V-CSI) reveals that there is little consistency between this variable and the charge rates for drug offenses among the provinces. Table 6.4 summarizes the sign of the coefficient and the level of significance of the trendline for each provinces V-CSI scatterplot. As the table depicts, there is little consistency among the drug offenses and no observable patterns. There are both positive and negative relationships occurring between the provinces and the drug offenses. In cannabis possession, there are six statistically significant relationships that were observed; three of these are positive relationships, while three are negative relationships. Among all the other drug offenses, there are only six statistically significant relationships.

Table 6.4 – Violent CSI Sign and Significance by Province

	Cannabis Possession		Cocaine Possession	
Province	Sign	Significance	Sign	Significance
British Colombia	-	**	-	
Alberta	+		-	
Saskatchewan	-	***	-	
Manitoba	-	***	-	
Ontario	+	***	-	
Quebec	+	***	+	**
New Brunswick	+	*	+	
Nova Scotia	+		+	*
Newfoundland	-		-	
	Cannabis TDP		**Cocaine TDP**	
Province	Sign	Significance	Sign	Significance
British Colombia	-		+	
Alberta	+		-	
Saskatchewan	+		-	
Manitoba	-	*	-	**
Ontario	+		+	
Quebec	+		-	
New Brunswick	+	**	-	
Nova Scotia	-	***	+	
Newfoundland	-		+	

Level of Significance: ≤10% = *; ≤5% = **; ≤1% = ***

Sign = coefficient of the trendline

Interestingly, when the relationships in both the Violent and Non-Violent CSI are observed side-by-side, many of the provinces have the same positive or negative trendline for each drug offense (Appendix A.4). This may be the result of police forces that do not change their enforcement practices based on the type of crime that is being committed (violent vs. non-violent), but rather the volume of crime that is being committed. As the analysis has shown, there is no consistent relationship between the V-CSI and the charge rates, although each province tends to have the same positive or negative relationship between the drug offense and each CSI.

6.12 Charge Approval Process

Of the provinces with a charge approval process (British Columbia, Quebec and New Brunswick), British Columbia has the lowest charge rates for three of the four drug offenses. Table 6.5 depicts a table which summarizes the charge rates in each province in 1998 and 2014, as well as the percentage change that occurred between 1998 and 2014. The provinces with a charge approval process have been highlighted in red. In all the displayed drug offense

categories, British Columbia has noticeably lower charge rates than Quebec and New Brunswick, whom also employ a charge approval process. British Columbia's higher evidentiary threshold could be impacting the charge rates, or it could represent the unique views and attitudes of British Columbia's law enforcement agencies.

Table 6.5: Change in Provincial Median Charge Rates over time

	Cannabis Possession				Cocaine Possession			
	1998	2014	% Change	Significance	1998	2014	% Change	Significance
Canada	78.9%	49.6%	**-37.2%**	***	90.9%	83.9%	**-7.7%**	*
Alberta	80.7%	21.2%	**-73.7%**	***	98.8%	76.0%	**-23.1%**	***
British Columbia	23.7%	24.2%	**2.2%**	***	69.3%	36.4%	**-47.5%**	
Saskatchewan	85.7%	54.7%	**-36.2%**	***	100.0%	97.3%	**-2.7%**	
Manitoba	95.4%	50.0%	**-47.6%**	***	98.9%	88.2%	**-10.9%**	
Ontario	79.5%	47.0%	**-40.9%**	***	90.9%	89.9%	**-1.1%**	
Quebec	68.4%	60.1%	**-12.2%**	***	88.2%	88.8%	**0.7%**	
Newfoundland	84.7%	49.2%	**-41.9%**	***	N/A	N/A	**N/A**	
Nova Scotia	69.5%	39.3%	**-43.4%**	***	97.6%	68.3%	**-30.0%**	***
New Brunswick	95.5%	52.9%	**-44.6%**	***	100.0%	76.7%	**-23.3%**	*
	Cannabis TDP				**Cocaine TDP**			
	1998	2014	% Change	Significance	1998	2014	% Change	Significance
Canada	89.9%	86.9%	**-3.4%**	**	98.1%	96.7%	**-1.4%**	
Alberta	90.2%	90.9%	**0.8%**	**	91.2%	94.4%	**3.6%**	
British Columbia	73.5%	56.0%	**-23.8%**	*	98.2%	89.8%	**-8.5%**	**
Saskatchewan	94.9%	87.6%	**-7.8%**		97.1%	100.0%	**3.0%**	
Manitoba	100.0%	98.4%	**-1.6%**		99.1%	98.4%	**-0.7%**	
Ontario	87.8%	83.3%	**-5.1%**		98.1%	98.2%	**0.1%**	**
Quebec	87.2%	91.8%	**5.3%**		98.3%	94.0%	**-4.4%**	
Newfoundland	92.9%	50%	**-46.2%**	***	N/A	N/A	**N/A**	
Nova Scotia	88.8%	85.1%	**-4.1%**		96.8%	87.5%	**-9.6%**	*
New Brunswick	92.9%	71.3%	**-23.2%**	***	66.7%	100.0%	**50.0%**	**

Level of Significance: ≤10% = *; ≤5% = **; ≤1% = ***

Sign = coefficient of the trendline

The level of significance column was determined by assessing the P-value from each provincial trendline. The trendline was from a regression of the charge rates for all the jurisdictions in a province on a time variable. The level of significance indicates the probability that the equation of the trendline, and thereby the model, was a result of random chance.

6.13 Conclusion – Graphical Analysis

In this chapter, graphical analyses and statistical summaries indicated that implementation conversion for cannabis possession has occurred across many Canadian jurisdictions. This analyses also exploited the variation that exists between jurisdictions to determine which variables affected the charge rates. British Columbia was found to be an outlier in much of the analysis, and affected the interpretation of the analysis with the variables Police Force, and Provincial Party. The CSI was shown to be statistically significant in some circumstances, and the charge approval process was shown to not uniformly affect charge rates among those provinces that employ the process. To more definitively discern the impact of these variables on

the various charge rates, the effect of the other explanatory variables must be held constant. The next chapter presents the results of the multiple regression that was carried out on each dependent variable.

7.0 Regression Results

7.1 Introduction

The graphical analysis in the previous chapter provided an initial exploration of the relationships between cannabis possession charge rates and various explanatory variables. The key relationship of interest, of course, is the one between the cannabis possession charge rate and year, since the nature of this relationship provides an indication of whether implementation conversion has taken place. While the graphical analysis showed that charge rates have generally fallen over time (i.e., the relationship between cannabis possession charge rates and year is negative), this analysis is partial in the sense that it does not capture the effect of the other explanatory variables that might also have an impact on the charge rates and that are correlated to some degree with cannabis charge rates. To effectively hold the other explanatory variables constant, multiple regression analysis was undertaken. The results of this regression analysis are presented below.

The regression analysis examines four different dependent variables: the charge rates for cannabis possession, cocaine possession, cannabis TDP, and cocaine TDP. The examination of four different charge rates is important since a comparison across the different charge rates allows for a determination of whether the relationship between cannabis possession charge rates and year is different than the relationship between other charge rates and year.

For each of these four dependent variables, a set of six regression models were estimated. In each case the analysis begins with a simple regression of year on the charge rate – this is captured in Model 1. Model 2 then adds dummy variables for the provinces, while Model 3 adds dummy variables for the nature of the political party in power at the federal and provincial levels. Model 4 adds a dummy variable for the RCMP and a variable capturing population. Model 5 adds dummy variables for the presence of a minority government at the federal and provincial level. Model 6 adds variables for violent and non-violent CSI. A dummy variable for the 'Charge Approval Process' was not included in the multiple regression analysis because it was too highly correlated with the dummy variables from three of the provinces.

The final model with all the variables added (Model 6) can be expressed as follows:

$$\text{Charge Rate} = \alpha + \tau\ \text{Year} + \sum_{i=1}^{8} \beta_i\ \text{ProvDum}_i + \delta\ \text{FedGovDum} + \sum_{i=1}^{3} \gamma_i\ \text{ProvGovDum}_i + \phi\ \text{RCMP} + \lambda\ \text{Pop} + \mu\ \text{FedMaj} + \theta\ \text{ProvMaj} + \xi\ \text{ViolentCSI} + \rho\ \text{NonViolentCSI} + \varepsilon$$

Of particular importance in the analysis is what happens to the sign and magnitude of the coefficient on Year as the analysis proceeds from Model 1 to Model 6. If the estimated sign and magnitude of the coefficient τ on Year remains relatively constant across the various models (i.e., as the rest of the explanatory variables are added) then this is evidence that some of the obvious political and economic factors that might have affected the charge rate have not changed in a systematic way over time and thus making the impact of Year appear to be bigger than it is. In other words, if Year still has an effect after these other variables have been added, then we have more confidence that the charge rate has changed over time.

7.2 Cannabis Possession Charge Rate

Table 7.1 presents the regression results for the dependent variable Cannabis Possession Charge Rate. The values presented in the table are the estimated coefficients for the various explanatory variables, with the t-values reported in brackets below the parameter estimates. The coefficients marked by asterisks are statistically significant at either the 10 percent (*), five percent (**) or one percent (***) level.

A comparison of Models 1 to 6 indicates that the Cannabis Possession Charge Rate and Year are negatively related across all the model specifications; this relationship is statistically significant at the one percent level in all the models. There is a change in the magnitude of the estimated coefficient on Year with the introduction of additional explanatory variables; specifically, as additional variables are added, the estimated coefficient becomes larger in absolute value terms. These results provide evidence in support of the hypothesis that implementation conversion is taking place. In addition, the results indicate that simply examining the relationship between cannabis charge rates and year without considering the other explanatory variables results in an underestimation of the extent to which implementation conversion is occurring.

Since Model 6 provides a larger adjusted R^2 than the other models and most of the explanatory variables retain their statistical significance in this model, the focus of the rest of the analysis is on Model 6. Consider first the provincial dummy variables, where Alberta is the province that is left out of the analysis. All the provincial dummy variables are statistically significant at the one percent level; these results indicate that each of the provinces have a base cannabis charge rate (i.e., the rate before the effect of the explanatory variables is considered) that is statistically different from that of Alberta. Among the provinces, Saskatchewan, Manitoba, and Newfoundland have higher initial charge rates than Alberta. The largest difference in the base charge rates occurs in British Columbia, where the base charge rate is 42% less than in Alberta.

The estimated coefficients for the dummy variables for the federal parties are calculated using the Federal Conservative party as the comparison point. As anticipated, federal Liberal governments had an estimated charge rate that was less than the federal Conservative Party; the estimated difference was 7.1 percent, with a level of statistical significance of one percent. For the provincial dummy variables, the comparison point is Provincial Liberal. Only Provincial NDP has an estimated coefficient that is statistically significant from Provincial Liberal; the estimated difference was 8.9 percent, with a level of statistical significant of one percent.

While the RCMP variable was a statistically significant estimate in Models 4 and 5, this statistical significance disappeared in Model 6. Thus, it is not possible to reject the hypothesis that the presence of the RCMP had no impact on the cannabis possession charge rate. The impact of the Population variable on the charge rate of cannabis possession was so minimal that the regression program did not return a numerical value. Thus, it is not possible to reject the hypothesis that Population has no impact on the cannabis possession charge rate. Population does not appear to have a statistically significant effect on the charge rate.

The estimated coefficient on Provincial Majority is negative and not statistically significant, while the estimated coefficient on Federal Majority is positive and statistically significant at the 10 percent level. This suggests that a majority federal government has a higher charge rate (2.6%) than a minority federal government, although this conclusion needs to be tempered by the fact that the coefficient is only statistically significant at the 10 percent level.

The Violent-CSI has a statistically positive relationship with the cannabis possession charge rate (the charge rate increases by 0.1% for every 1-point increase in the Violent-CSI), while the Non-

Violent-CSI has a negative relationship with the charge rate (a 1-point increase in the Non-Violent-CSI is associated with a -0.1% change in the charge rate). The Violent-CSI variable is significant at the five percent level, and the Non-Violent-CSI at the one percent level. The negative estimate for the Non-Violent-CSI is consistent with the idea that police forces have a limited pool of resources with which to pursue charges for non-violent offenses; thus, as effort shifts to deal with Non-Violent crimes, the effort devoted to deal with cannabis possession is lowered. The estimate for the Violent-CSI is consistent with the idea that jurisdictions with a higher incidence of violent crimes are provided with more resources available to pursue charges for other offenses; the estimate is also consistent with the idea that violent crime incidents are more likely to include cannabis possession offenses among each incident.

Table 7.1: Cannabis Possession Charge Rate - Regression Results

Independent Variables	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Year	-0.015	-0.014	-0.021	-0.021	-0.022	-0.025
	t = -9.101***	t = -12.109***	t = -9.122***	t = -9.180***	t = -9.486***	t = -10.906***
Province: British Columbia		-0.427	-0.43	-0.432	-0.434	-0.438
		t = -19.068***	t = -15.776***	t = -15.931***	t = -15.818***	t = -16.412***
Province: Manitoba		0.13	0.186	0.176	0.181	0.198
		t = 4.737***	t = 5.507***	t = 5.192***	t = 5.313***	t = 5.814***
Province: NewBrunswick		-0.053	-0.06	-0.057	-0.058	-0.111
		t = -1.818*	t = -2.037**	t = -1.947*	t = -1.981**	t = -3.769***
Province: Newfoundland		0.141	0.135	0.113	0.111	0.087
		t = 4.504***	t = 4.257***	t = 3.415***	t = 3.367***	t = 2.702***
Province: Nova Scotia		-0.087	-0.075	-0.077	-0.087	-0.107
		t = -2.766***	t = -2.364**	t = -2.443**	t = -2.686***	t = -3.309***
Province: Ontario		-0.059	-0.072	-0.098	-0.105	-0.125
		t = -3.004***	t = -3.118***	t = -3.950***	t = -4.223***	t = -5.165***
Province: Quebec		-0.038	-0.079	-0.107	-0.106	-0.123
		t = -1.682*	t = -2.484**	t = -3.260***	t = -3.222***	t = -3.831***
Province: Saskatchewan		0.077	0.115	0.117	0.115	0.15
		t = 3.243***	t = 4.237***	t = 4.330***	t = 4.254***	t = 5.472***
Federal Government: Liberal			-0.066	-0.067	-0.081	-0.071
			t = -3.039***	t = -3.087***	t = -3.622***	t = -3.250***
Provincial Government: NDP			-0.083	-0.083	-0.093	-0.089
			t = -3.178***	t = -3.183***	t = -3.548***	t = -3.489***
Provincial Government: PQ			0.046	0.047	0.024	0.026
			t = 1.501	t = 1.523	t = 0.770	t = 0.838
Provincial Government: PC			-0.019	-0.019	-0.024	-0.021
			t = -1.049	t = -1.068	t = -1.304	t = -1.137
Police Force: RCMP				-0.04	-0.04	0.011
				t = -2.560**	t = -2.558**	t = 0.623
Population				0	0	0
				t = 1.203	t = 1.193	t = 0.168
Provincial Majority					-0.021	-0.028
					t = -1.097	t = -1.455
Federal Majority					0.026	0.023
					t = 1.953*	t = 1.734*
Violent CSI						0.001
						t = 2.502**
Non-Violent CSI						-0.001
						t = -6.016***
Adjusted R^2	0.095	0.56	0.571	0.575	0.578	0.601
Note:	*p<0.1; **p<0.05; ***p<0.01					

7.3 Cocaine Possession Charge Rate

Table 7.2 presents the regression results for the dependent variable Cocaine Possession Charge Rate. A comparison of Models 1 to 6 indicates that the Cocaine Possession Charge Rate and Year are negatively related across all the model specifications; this relationship is statistically significant in all the models, although it is only significant at the one percent level in Models 1, 2, and 6. Additionally, as further variables are introduced in successive models, the value of the estimated coefficient for Year declines slightly, although Model 6 produces the largest coefficient in absolute value terms (-.008).

Since Model 6 provides a larger adjusted R^2 than the other models, the focus of the rest of the analysis is again on Model 6. Consider first the provincial dummy variables, where Alberta is the province that is left out of the analysis. With Cocaine Possession, only four provinces return results that are statistically significant when compared to Alberta (all at the one percent level): British Columbia, Nova Scotia, Ontario and Quebec. All these provinces have lower charge rates than Alberta; the largest difference in the base charge rate again occurs in British Columbia, whose base charge rate is 45% less than in Alberta.

The estimated coefficients for the dummy variables for the federal parties are calculated using the Federal Conservative party as the comparison point, while the provincial dummy variables used the provincial Liberals as the comparison point. Although the federal Liberals once more had a lower charge rate than the federal Conservatives, this result was not statistically significant. None of the provincial parties returned a statistically significant result.

The RCMP variable was found to have a negative coefficient, resulting in a base charge rate that is 7% less than the Municipal police force. This result was statistically significant at the one percent level in each of the models. This result is different than what had been hypothesized, and may reflect the much lower charge rates of jurisdictions in British Columbia, of which several RCMP policed jurisdictions were captured in the data set. Nevertheless, we can reject the null hypothesis that the presence of the RCMP had no impact on the cocaine possession charge rate. The impact of the Population variable on the cocaine possession charge rate was so minimal, that the regression program did not return a numerical value, although the coefficient was positive, and the result was significant at the ten percent level. Thus, it is possible to reject the hypothesis that Population does not have an impact on the cocaine possession charge rate.

The estimated coefficient on Provincial Majority is negative and not statistically significant, while the estimated coefficient in Federal Majority is positive and is not statistically significant.

The Violent CSI has a positive relationship with the cocaine possession charge rate, although this relationship is not statistically significant, while the Non-Violent CSI has a negative relationship with the cocaine possession charge rate (a 1-point increase in the Non-Violent CSI is associated with a -0.1% change in the charge rate), and is statistically significant at the one percent level. The results for the Non-Violent CSI are consistent with the idea that police forces have a limited pool of resources with which to pursue charges for non-violent offenses, as had been observed with the Cannabis Possession Charge Rate variable.

Table 7.2: Cocaine Possession Charge Rate - Regression Results

Independent Variables	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Year	-0.005	-0.004	-0.004	-0.004	-0.005	-0.008
	t = -2.901***	t = -3.356***	t = -1.796*	t = -1.788*	t = -2.106**	t = -3.125***
Province: British Columbia		-0.42	-0.445	-0.446	-0.449	-0.454
		t = -20.533***	t = -16.705***	t = -17.439***	t = -16.976***	t = -17.179***
Province: Manitoba		0.116	0.07	0.044	0.047	0.051
		t = 4.319***	t = 1.937*	t = 1.258	t = 1.346	t = 1.412
Province: New Brunswick		0.003	-0.005	-0.011	-0.012	-0.045
		t = 0.103	t = -0.178	t = -0.360	t = -0.399	t = -1.425
Province: Newfoundland		0.086	0.087	0.035	0.039	0.036
		t = 1.860*	t = 1.876*	t = 0.772	t = 0.859	t = 0.801
Province: Nova Scotia		-0.033	-0.048	-0.091	-0.098	-0.115
		t = -0.973	t = -1.373	t = -2.638***	t = -2.767***	t = -3.158***
Province: Ontario		0.033	0.018	-0.036	-0.041	-0.063
		t = 1.879*	t = 0.825	t = -1.578	t = -1.778*	t = -2.598***
Province: Quebec		0.017	0.001	-0.058	-0.06	-0.081
		t = 0.860	t = 0.017	t = -1.965**	t = -2.011**	t = -2.656***
Province: Saskatchewan		0.063	0.037	0.009	0.008	0.03
		t = 2.424**	t = 1.266	t = 0.319	t = 0.295	t = 0.990
Federal Government: Liberal			-0.0002	-0.005	-0.011	-0.008
			t = -0.007	t = -0.257	t = -0.540	t = -0.400
Provincial Government: NDP			0.03	0.02	0.012	0.014
			t = 1.035	t = 0.704	t = 0.417	t = 0.487
Provincial Government: PQ			-0.008	-0.005	-0.016	-0.021
			t = -0.319	t = -0.196	t = -0.603	t = -0.777
Provincial Government: PC			-0.021	-0.019	-0.023	-0.028
			t = -1.082	t = -1.008	t = -1.166	t = -1.423
Police Force: RCMP				-0.102	-0.101	-0.07
				t = -6.026***	t = -5.922***	t = -3.565***
Population				0	0	0
				t = 2.565**	t = 2.561**	t = 1.899*
Provincial Majority					-0.014	-0.022
					t = -0.762	t = -1.138
Federal Majority					0.01	0.01
					t = 0.782	t = 0.733
Violent CSI						0.0001
						t = 0.543
Non-Violent CSI						-0.001
						t = -2.682***
Adjusted R^2	0.012	0.618	0.618	0.647	0.647	0.652
Note:	*p<0.1; **p<0.05; ***p<0.01					

7.4 Cannabis TDP Charge Rate

Table 7.3 presents the regression results for the dependent variable Cannabis TDP Charge Rate. A comparison of Models 1 to 6 indicates that the Cannabis TDP Charge Rate and Year are negatively related across all the model specifications; this relationship is statistically significant in all the models, although it is only significant at the five percent level in Model 6. The absolute value of the estimated coefficient for Year increases slightly throughout the models, increasing by .002 from Model 1 to Model 6. These results provide weak evidence that implementation conversion is taking place with cannabis TDP, owing to the minimal change in the absolute value of Year over time.

In this regression analysis, Model 4 provided the largest adjusted R^2 than any other model. Thereby, this analysis will exclude those variables captured in Models 5 and 6, as none of the variables captured in Models 5 and 6 returned statistically significant results. Among the provincial dummy variables, of which Alberta is again the comparison point, only three provinces returned statistically significant results: British Columbia, Ontario, and Quebec. All three provinces had lower charge rates than Alberta, while Quebec was the only province who was not significant at the one percent level. Again, British Columbia exhibited the largest difference between the comparison point; their base charge rate was 22% lower than Alberta's.

The estimated coefficients for the federal parties are calculated using the federal Conservative party as the comparison point, while the provincial dummy variables used the provincial Liberals as the comparison point. The federal Liberals once more had a lower charge rate than the federal Conservatives, although this result was not statistically significant. None of the provincial parties returned a statistically significant result.

The last variables to be examined in Model 4 are the RCMP dummy variable and Population. The RCMP variable was found to have a negative coefficient, resulting in a base charge rate for cannabis TDP that is 8.8% less than the Municipal police force, and was significant at the one percent level. Similar to the previous analysis, this result may reflect the much lower charge rates of jurisdictions in British Columbia, of which several RCMP policed jurisdictions were captured in the data set. The impact of the Population variable on the cannabis TDP charge rate was so minimal, that the regression program did not return a numerical value, although the coefficient was positive, and the result was significant at the ten percent level.

Table 7.3: Cannabis TDP Charge Rate - Regression Results

Independent Variables	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Year	-0.004	-0.004	-0.005	-0.005	-0.005	-0.006
	t = -3.309***	t = -3.221***	t = -1.951*	t = -2.120**	t = -2.239**	t = -2.470**
Province: British Columbia		-0.204	-0.22	-0.219	-0.219	-0.22
		t = -8.683***	t = -7.718***	t = -7.873***	t = -7.717***	t = -7.715***
Province: Manitoba		0.065	0.035	0.02	0.022	0.021
		t = 2.336**	t = 0.990	t = 0.587	t = 0.637	t = 0.591
Province: New Brunswick		-0.022	-0.027	-0.022	-0.022	-0.034
		t = -0.701	t = -0.837	t = -0.691	t = -0.701	t = -1.054
Province: Newfoundland		0.015	0.011	-0.027	-0.027	-0.03
		t = 0.461	t = 0.331	t = -0.820	t = -0.822	t = -0.893
Province: Nova Scotia		-0.018	-0.029	-0.048	-0.052	-0.059
		t = -0.490	t = -0.785	t = -1.329	t = -1.408	t = -1.573
Province: Ontario		-0.054	-0.063	-0.105	-0.108	-0.112
		t = -2.660***	t = -2.619***	t = -4.275***	t = -4.333***	t = -4.472***
Province: Quebec		-0.002	-0.009	-0.054	-0.054	-0.056
		t = -0.080	t = -0.266	t = -1.694*	t = -1.684*	t = -1.731*
Province: Saskatchewan		0.006	-0.014	-0.009	-0.01	-0.006
		t = 0.238	t = -0.480	t = -0.331	t = -0.368	t = -0.197
Federal Government: Liberal			-0.009	-0.012	-0.016	-0.013
			t = -0.426	t = -0.550	t = -0.700	t = -0.592
Provincial Government: NDP			0.023	0.022	0.019	0.019
			t = 0.839	t = 0.837	t = 0.712	t = 0.699
Provincial Government: PQ			-0.011	-0.011	-0.017	-0.017
			t = -0.391	t = -0.395	t = -0.574	t = -0.556
Provincial Government: PC			-0.012	-0.012	-0.013	-0.013
			t = -0.663	t = -0.700	t = -0.701	t = -0.688
Police Force: RCMP				-0.088	-0.088	-0.076
				t = -5.324***	t = -5.309***	t = -4.067***
Population				0	0	0
				t = 1.669*	t = 1.666*	t = 1.183
Provincial Majority					-0.01	-0.011
					t = -0.503	t = -0.541
Federal Majority					0.005	0.006
					t = 0.383	t = 0.415
Violent-CSI						0.0002
						t = 1.102
Non-Violent CSI						-0.0003
						t = -1.485
Adjusted R^2	0.014	0.201	0.199	0.238	0.237	0.237
Note:	*p<0.1; **p<0.05; ***p<0.01					

7.5 Cocaine TDP Charge Rate

Table 7.4 presents the regression results for the last dependent variable to be analyzed, Cocaine TDP Charge Rate. A comparison of Models 1 to 6 indicates that the Cocaine TDP Charge Rate and Year are negatively related across all the model specifications. However, unlike every other dependent variable examined, this relationship is not statistically significant in any of the models. Based on these results, there is no evidence that implementation conversion has been taking place with cocaine TDP offenses, owing to the lack of statistical significance found in the regression results.

In this regression analysis, Model 4 provided the largest adjusted R^2 than any other model. Thereby, this analysis will exclude those variables captured in Models 5 and 6, as none of the

variables captured in Models 5 and 6 returned statistically significant results. Among the dummy variables for Province, of which Alberta is again the comparison point, only British Columbia returned a statistically significant result (one percent level). British Columbia's base charge rate for cocaine TDP was 6.8% less than Alberta's.

The estimated coefficients for the federal parties were calculated using the federal Conservative party as the comparison point, while the provincial dummy variables used the provincial Liberals as the comparison point. The federal Liberals once more had a lower charge rate than the federal Conservatives, although this result was not statistically significant. Among the provincial parties, only the NDP returned a statistically significant result (one percent level), as they exhibited a charge rate that was 4.9% less than the provincial Liberals.

The last variables to be examined in Model 4 are the RCMP dummy variable and Population. The RCMP variable was found to have a negative coefficient, resulting in a base charge rate for cocaine TDP that is 3.1% less than the Municipal police force, and was significant at the one percent level. As it has been highlighted, this result likely reflects the much lower charge rates of jurisdictions in British Columbia, of which several RCMP policed jurisdictions were captured in the data set. The impact of the Population variable on the cocaine TDP charge rate was not found to be statistically significant.

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Table 7.4: Cocaine TDP Charge Rate - Regression Results

Independent Variables	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Year	-0.001	-0.001	-0.001	-0.001	-0.001	-0.002
	t = -1.124	t = -1.192	t = -0.703	t = -0.520	t = -0.704	t = -1.033
Province: British Columbia		-0.055	-0.068	-0.068	-0.066	-0.066
		t = -4.264***	t = -4.251***	t = -4.255***	t = -4.019***	t = -4.026***
Province: Manitoba		0.061	0.01	0.003	0.005	0.004
		t = 3.657***	t = 0.449	t = 0.120	t = 0.223	t = 0.163
Province: New Brunswick		0.012	0.009	0.006	0.007	-0.0001
		t = 0.693	t = 0.480	t = 0.343	t = 0.392	t = -0.008
Province: Newfoundland		0.008	0.006	-0.009	-0.008	-0.01
		t = 0.336	t = 0.269	t = -0.367	t = -0.344	t = -0.409
Province: Nova Scotia		0.016	0.004	-0.007	-0.012	-0.015
		t = 0.780	t = 0.173	t = -0.355	t = -0.558	t = -0.676
Province: Ontario		0.035	0.03	0.016	0.016	0.012
		t = 3.141***	t = 2.242**	t = 1.150	t = 1.093	t = 0.806
Province: Quebec		0.03	0.013	-0.0003	0.0002	-0.004
		t = 2.427**	t = 0.746	t = -0.014	t = 0.009	t = -0.200
Province: Saskatchewan		0.025	-0.004	-0.012	-0.013	-0.006
		t = 1.629	t = -0.232	t = -0.684	t = -0.713	t = -0.278
Federal Government: Liberal			-0.008	-0.008	-0.008	-0.006
			t = -0.683	t = -0.688	t = -0.664	t = -0.498
Provincial Government: NDP			0.05	0.049	0.048	0.05
			t = 2.948***	t = 2.870***	t = 2.781***	t = 2.891***
Provincial Government: PQ			0.025	0.026	0.025	0.024
			t = 1.571	t = 1.644	t = 1.510	t = 1.472
Provincial Government: PC			-0.005	-0.004	-0.002	-0.003
			t = -0.487	t = -0.368	t = -0.194	t = -0.264
Police Force: RCMP				-0.031	-0.03	-0.022
				t = -2.915***	t = -2.884***	t = -1.695*
Population				0	0	0
				t = -0.329	t = -0.324	t = -0.498
Provincial Majority					-0.01	-0.011
					t = -0.870	t = -0.964
Federal Majority					-0.003	-0.003
					t = -0.322	t = -0.343
Violent-CSI						0.00004
						t = 0.260
Non-Violent CSI						-0.0002
						t = -1.073
Adjusted R^2	0.0004	0.133	0.15	0.159	0.157	0.157
Note:	*p<0.1; **p<0.05; ***p<0.01					

7.6 Conclusion

In this chapter, the regression analyses were presented and discussed for each drug offense. In each regression analysis, an emphasis was placed on examining the statistical significance of the variable Year throughout the model specifications, and whether the statistical significance of Year changed as additional explanatory variables were added. Overall, the Provincial variables and the Police Force variable were often found to produce statistically significant results. Table 7.5 presents a summary table of the regression results. As Model 6 produced the largest adjusted R^2 value among cannabis possession and cocaine possession, it was the model used to present the findings for each dependent variable. These results will help to guide a discussion of the findings

in the next chapter in this thesis, by allowing the research questions and possible answers to be understood from a quantitative basis.

Table 7.5: Summary of Regression Results

Independent Variables	Cannabis Possession: Model 6	Cocaine Possession: Model 6	Cannabis TDP: Model 6	Cocaine TDP: Model 6
Year	-0.025	-0.008	-0.006	-0.002
	t = -10.906***	t = -3.125***	t = -2.470**	t = -1.033
Province: British Columbia	-0.438	-0.454	-0.22	-0.066
	t = -16.412***	t = -17.179***	t = -7.715***	t = -4.026***
Province: Manitoba	0.198	0.051	0.021	0.004
	t = 5.814***	t = 1.412	t = 0.591	t = 0.163
Province: NewBrunswick	-0.111	-0.045	-0.034	-0.0001
	t = -3.769***	t = -1.425	t = -1.054	t = -0.008
Province: Newfoundland	0.087	0.036	-0.03	-0.01
	t = 2.702***	t = 0.801	t = -0.893	t = -0.409
Province: Nova Scotia	-0.107	-0.115	-0.059	-0.015
	t = -3.309***	t = -3.158***	t = -1.573	t = -0.676
Province: Ontario	-0.125	-0.063	-0.112	0.012
	t = -5.165***	t = -2.598***	t = -4.472***	t = 0.806
Province: Quebec	-0.123	-0.081	-0.056	-0.004
	t = -3.831***	t = -2.656***	t = -1.731*	t = -0.200
Province: Saskatchewan	0.15	0.03	-0.006	-0.006
	t = 5.472***	t = 0.990	t = -0.197	t = -0.278
Federal Government: Liberal	-0.071	-0.008	-0.013	-0.006
	t = -3.250***	t = -0.400	t = -0.592	t = -0.498
Provincial Government: NDP	-0.089	0.014	0.019	0.05
	t = -3.489***	t = 0.487	t = 0.699	t = 2.891***
Provincial Government: PQ	0.026	-0.021	-0.017	0.024
	t = 0.838	t = -0.777	t = -0.556	t = 1.472
Provincial Government: PC	-0.021	-0.028	-0.013	-0.003
	t = -1.137	t = -1.423	t = -0.688	t = -0.264
Police Force: RCMP	0.011	-0.07	-0.076	-0.022
	t = 0.623	t = -3.565***	t = -4.067***	t = -1.695*
Population	0	0	0	0
	t = 0.168	t = 1.899*	t = 1.183	t = -0.498
Provincial Majority	-0.028	-0.022	-0.011	-0.011
	t = -1.455	t = -1.138	t = -0.541	t = -0.964
Federal Majority	0.023	0.01	0.006	-0.003
	t = 1.734*	t = 0.733	t = 0.415	t = -0.343
Violent CSI	0.001	0.0001	0.0002	0.00004
	t = 2.502**	t = 0.543	t = 1.102	t = 0.260
Non-Violent CSI	-0.001	-0.001	-0.0003	-0.0002
	t = -6.016***	t = -2.682***	t = -1.485	t = -1.073
Adjusted R^2	0.601	0.652	0.237	0.157
Note:	*p<0.1; **p<0.05; ***p<0.01			

8.0 Discussion and Conclusion

8.1 Introduction

At the beginning of this thesis, the possibility was raised that, overall, the degree of enforcement of cannabis possession laws was falling, and that law enforcement agencies were inconsistently enforcing cannabis possession laws across jurisdictions in Canada. The purpose of this thesis, was to undertake an analysis of drug enforcement data from several Canadian cities to investigate the differing enforcement of cannabis laws, and determine whether implementation conversion is occurring in some jurisdictions. To this end, this thesis posed two research questions:

i. Is implementation conversion in the enforcement of cannabis laws taking place across jurisdictions in Canada?
ii. Is there equal enforcement across jurisdictions over time, and if not, what are some of the factors that affect police officers' decisions to charge an individual for a drug crime?

A graphical and regression analysis was then conducted on four dependent variables to answer these questions. The four dependent variables were cannabis possession, cannabis TDP, cocaine possession, and cocaine TDP. This chapter will discuss the implications of the analysis on the research questions.

8.2 The Effect of Year on Implementation Conversion and Street-Level Bureaucrats

The graphical analysis suggested that the variable Year contributed to a downward trend in all the drug offenses, except for cocaine TDP, while the regression analysis confirmed the statistical significance of this finding. Using Model 6 from each regression analysis, the size differential of the estimated coefficient on the variable Year was calculated between cannabis possession and the other dependent variables. The estimated coefficient on the variable Year for cannabis possession was 2.12 times greater than cocaine possession, 11.5 times greater than cocaine TDP, and 3.16 times greater than cannabis TDP, when the effects of the other explanatory variables were accounted for. The disproportionately large effect of the variable Year on cannabis

possession can be reaffirmed by calculating the percentage change in the charge rate that is explained by the time trend. Table 8.1 uses the estimated coefficient of Year in Model 6 of each regression analysis, and the national median charge rate at three points in time (1998, 2006, and 2014), to calculate the percentage change in the charge rate that is explained by the time trend, for each dependent variable. As Table 8.1 shows, the time trend explains more of the charge rate for cannabis possession, than any other dependent variable.

Of course, the variable Year is not thought to be directly contributing to lowered cannabis possession charge rates. Instead, Year is a proxy variable that captures a set of behaviours that are the underlying cause of declining charge rates. Since the coefficient on Year retained its statistical significance, and its magnitude was maintained or enhanced, with the addition of other key political and economic variables, there is greater confidence that the behaviours captured in the Year variable had an impact on the charge rate.

There are several factors that may have contributed to this downward trend in the charge rate for cannabis possession: when resources are constrained, street-level bureaucrats had to make trade-offs; a growing perception among police officers that non-cannabis offenses were important to enforce; and the creation of a medical cannabis industry that legitimized the use of cannabis among the public. These factors, and others, contributed to the phenomenon of implementation conversion – policy change that was characterized in this case by street-level bureaucrats who redirected the aims of the policy to achieve ends that are different from its original purpose, without changing the formal rules.

Table 8.1: The Percentage Change in the Charge Rate that is explained by the Time Trend

	Cannabis Poss.	Cocaine Poss.	Cannabis TDP	Cocaine TDP
1998	3.16%	0.88%	0.66%	0.20%
2006	4.49%	0.90%	0.70%	0.20%
2014	5.04%	0.95%	0.69%	0.20%

As the literature on policy conversion makes clear, policy conversion has been characterized as a type of policy change brought forth by a central political actor who knowingly altered the interpretation or direction of a policy or institution (Hacker et al., 2013, pg. 8). This central political actor actively redirects resources elsewhere, and can thereby make substantive changes

by using policies and existing institutions for a new purpose. This thesis looks at a different question. It makes no attempt to examine what political or strategic actors are doing, but it instead looks at the implementation stage to discern how policy can change through alternative means. This thesis makes the claim that changes in policy outcomes do not always have to be a deliberate act by central policy actors. This thesis observed that street-level bureaucrats, not political actors, brought about substantive changes in cannabis possession charge rates across the country. Additionally, this change in cannabis policy was not a deliberate decision that was centrally made – it resulted from the collective discretion that decentralized decision-makers, street-level bureaucrats, exhibited in the job. These street-level bureaucrats shifted resources towards different ends, and as a result, cannabis possession charge rates declined in all provinces except for British Columbia, resulting in substantive changes to cannabis criminalization. In this case, implementation conversion occurred because of a decentralized group of street-level bureaucrats who made decisions independent of other jurisdictions to enforce cannabis possession less frequently.

These findings reveal the influence that is provided to street-level bureaucrats in their jobs. When street-level bureaucrats are given discretion in their roles, this amounts to an ability to influence the implementation and enforcement of policy. Police officers, who exert discretion every day in their jobs, have considerable influence over the level of enforcement for various offenses, in part because their actions are costly to monitor. This is an example of the principal-agent relationship, whereas the agent (police officers) might take actions that are different than what the policy has specified, because of information asymmetry. Street-level bureaucrats can act on their own, in part because of the inherent discretion afforded them in their jobs. As well, the constitutional separation of powers makes it almost impossible for the actions of police officers to be controlled by policy makers at the national level. Although there hadn't been a formal change in cannabis policy, street-level bureaucrats used their discretion to influence the enforcement of this policy, to the point where charge rates dropped by nearly 30% for cannabis possession over a 16-year period.

8.4 Changing Public Attitudes

The analysis showed that the declining charge rate for cannabis possession was not reflected in the other drug offenses, indicating a unique set of circumstances for cannabis possession. Cannabis possession might be unique in that public attitudes regarding cannabis consumption have changed dramatically over the past 20 years, as compared to cocaine consumption, and the trafficking of drugs. These changing public attitudes may have affected the discretion shown by police officers with cannabis possession laws.

This sustained drop in the charge rate for cannabis possession reveals how policy can change in response to changing views of the public and street-level bureaucrats, even though no change had been made to formal policy. Over time, the public viewed recreational cannabis use as less of a threat, and this view was reflected in the enforcement practices of police officers throughout the country. The ability of policy to begin changing in advance of either full electoral support or expended political capital may be an important feature of government. This incremental change to policy over time may also make the formal changes easier, because the public has had time to slowly accept and adjust to the de facto change in policy.

8.5 Provincial Outliers Factors

The graphical and regression analysis also revealed that there is something unique occurring in British Columbia. As compared to the other provinces, British Columbia had the lowest charge rates among the four dependent variables. If these low charge rates were the result of the charge approval process, then we would have expected to see lower than average charge rates in New Brunswick and Quebec. However, Quebec and New Brunswick had similar charge rates to the other provinces. One of the reasons for British Columbia's abnormally low charge rates might be the 'substantial' evidentiary threshold that is only in place in British Columbia. The legal system in British Columbia may also deal with low-level drug offenses in a manner that is less punitive and more focused on rehabilitation. Regardless, the low charge rates in British Columbia noticeably affected the analysis of several variables.

Notably, the charge rate for cannabis possession was slowly converging to a more common rate in all the provinces, during the observed time period. Those provinces with a high charge rate in

1998, mostly the Maritime Provinces and Western Provinces, saw their cannabis possession charge rates decline rapidly throughout the observed time period. Ontario and Quebec, which had more moderate charge rates in 1998, saw their charge rates decline more slowly. British Columbia, whose charge rates were the lowest of any province, saw their charge rates increase over time to match some of the other provinces. This congruence of provincial charge rates for cannabis possession may indicate that public sentiment concerning recreational cannabis use was becoming more similar. It could have also resulted from a type of policy learning, whereby some jurisdictions saw what other jurisdictions were doing with cannabis possession charges, and chose to emulate those policy choices, because the effects of the lowered charges were seen as working well. Additionally, there may have been a collective pressure on police officers across Canada to focus their efforts on different criminal offenses. In British Columbia's case, police officers may have felt that to validate cannabis possession enforcement, a minimum standard must be applied, leading to increasing charge rates.

8.6 Limitations

This thesis includes a few limitations that may have affected the analysis and results. The only comparator drug chosen was cocaine, whereas the charge rates for other drugs might have been different. Cocaine offenses might be treated more seriously by police officers than the more common psychedelic drugs. Additionally, although the raw data that was used to calculate the charge rates had been collected prior to 1998, this data is not available electronically. A longer time period could have provided more context into the charge rates and how these drugs were being affected by the independent variables that were examined. As well, in the cases where a rural jurisdiction had three or fewer annual incidents recorded for a drug offense, the charge rate was not calculated for those drug offenses. This was done to prevent artificially high charge rates in some jurisdictions from skewing the jurisdictional analysis, but may have skewed some of the aggregate analysis. Lastly, we cannot know whether the impact of the explanatory variables are the really the same across all the jurisdictions, and whether all the relevant variables have been included. To the extent that these issues exist, the results of the analysis will not provide a proper measure of the factors at work in determining charge rates.

8.7 Areas for Future Research

To gain a more comprehensive understanding of how charge rates have changed throughout Canada over the years, and whether implementation conversion has occurred with other drug offenses, additional drug offenses could be examined. Common psychedelic drugs, such as psilocybin and LSD, as well as more common street drugs, such as heroine and methamphetamines, could be examined in Canada's Census Metropolitan Areas. Additionally, implementation conversion by street-level bureaucrats could be studied from a judicial perspective, rather than from an enforcement perspective. If aggregate court records could be obtained with sufficient detail, the effects of street-level bureaucrats in the judicial branch could be examined, as both judges and prosecutors are afforded discretion in their line of work.

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10.0 Appendix

Appendix A.1: Jurisditional Sign and Coefficient for each Drug Offense - Part 1 of 2

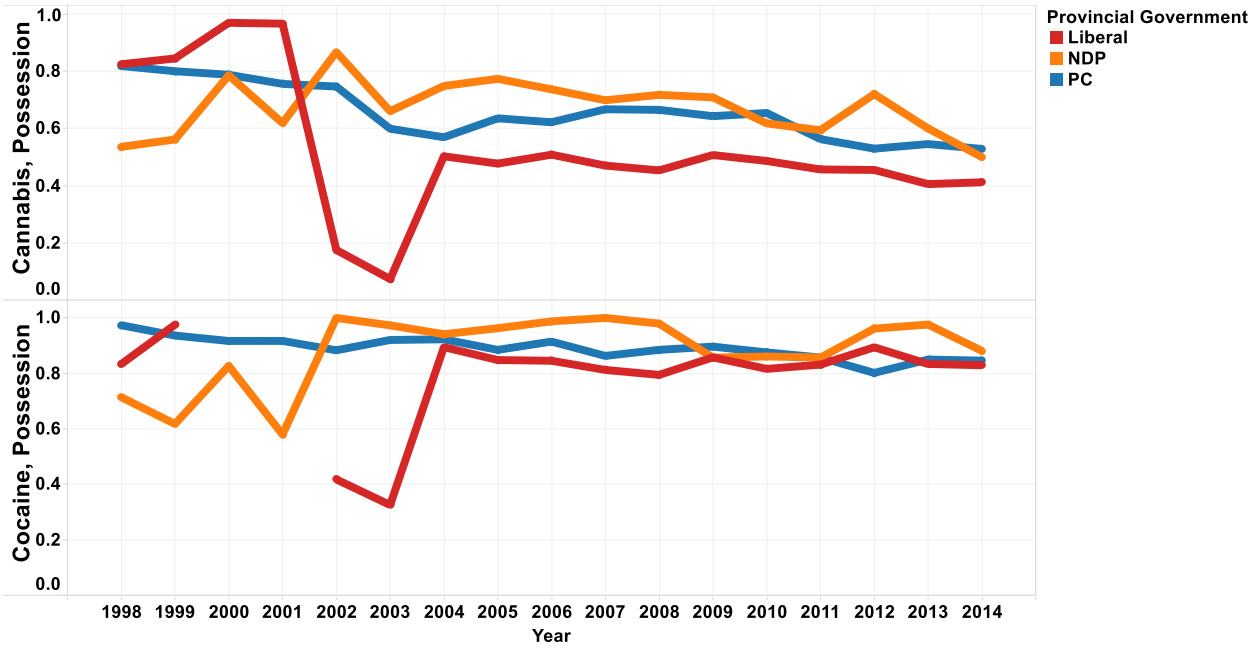
City	Province	Sign	Cannabis Poss.	Sign	Cocaine Poss.	Sign	Cannabis TDP	Sign	Cocaine TDP
Abbotsford	BC	+	***	+		-		-	*
Cranbrook	BC	+		-		-		-	
Kelowna	BC	+	***	+		-	*	-	
Prince George	BC	+	**	+		-		-	
Revelstoke	BC	-		+	**	-	*	NA	NA
Vancouver	BC	+	**	-	***	-	***	-	***
Victoria	BC	-	**	-	***	-	**	+	
Banff	AB	-	***	-	***	-		-	*
Calgary	AB	-	***	-		-		+	*
Drumheller	AB	-	***	-		-		-	
Edmonton	AB	-	*	-	*	-	**	-	***
Grand Prairie	AB	-	***	-	**	-	*	-	
North Battleford	SK	-	**	+		-		-	
Regina	SK	-	***	-		-		-	
Saskatoon	SK	-		+		-		-	
Swift Current	SK	-	***	-		-		NA	NA
Yorkton	SK	-		NA	NA	-		NA	NA
Brandon	MN	-	***	-	*	-		NA	NA
Portage La Prairie	MN	-		-		-		+	
Winnipeg	MN	-	***	-	**	-	**	-	**

Level of Signficance: ≤10% = *; ≤5% = **; ≤1% = ***
Sign = coefficient of the trendline

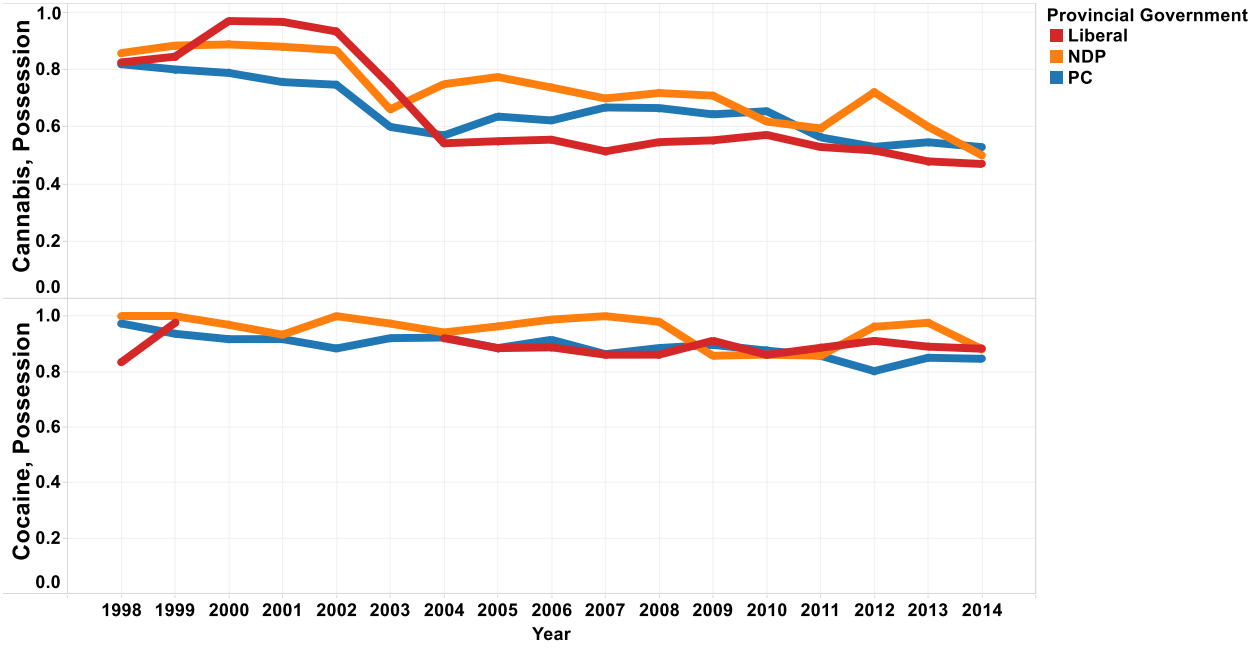
Appendix A.1: Jurisditional Sign and Coefficient for each Drug Offense - Part 2 of 2

City	Province	Sign	Cannabis Poss.	Sign	Cocaine Poss.	Sign	Cannabis TDP	Sign	Cocaine TDP
Barrie	ON	+		+		-		-	
Brantford	ON	+		+		-		+	*
Guelph	ON	-	*	+		-	**	-	
Hamilton	ON	-	**	-		-		+	
Hawkesbury	ON	-		+		-		+	
Kingston	ON	+		+		-		+	*
Kirkland Lake	ON	-		+		+		+	
Kitchner	ON	-	***	-		-	***	+	
London	ON	-	***	-		+		+	
Ottawa-Gatineau	ON	-	***	+		-	***	-	
Peterborough	ON	-		-		-		NA	NA
St. Catherines	ON	+	**	+	***	-		+	
Sudbury	ON	-	***	-		-	**	+	
Thunder Bay	ON	-	***	-	**	-	**	-	
Toronto	ON	-	***	-	***	+	**	+	
Windsor	ON	-	***	-	***	-		+	***
Montreal	QB	-	***	-	**	+		+	
Ottawa-Gatineau	QB	-	**	-		-		-	
Quebec City	QB	-	**	+		-		-	***
Saguenay	QB	-	**	+		+	**	-	
Sherbrooke	QB	-	**	-		-		-	**
Trois-Rivieres	QB	-	***	-		+	**	-	
Campbellton	NB	-	**	NA	NA	-		NA	NA
Moncton	NB	+		-		-		+	
Saint John	NB	-	***	-	**	-		+	
Corner Brook	NL	-	***	NA	NA	-		NA	NA
St. Johns	NL	-	***	-		-	***	+	*
Halifax	NS	-	***	-	***	-	***	-	**
Yarmouth	NS	-	*	NA	NA	+	**	NA	NA

Level of Signficance: ≤10% = *; ≤5% = **; ≤1% = ***
Sign = coefficient of the trendline



A.2: Median Charge Rates for Possession, colored by Provincial Party, including British Columbia



A.3: Median Charge Rates for Possession, colored by Provincial Party, excluding British Columbia

A.4: Summary Table of Consistent Signs between Crime Severity Index's by Province

	Cannabis Possession	Cocaine Possession
Province	Same Sign b/w CSI's	Same Sign b/w CSI's
British Colombia	**Yes**	**Yes**
Alberta	**Yes**	**Yes**
Saskatchewan	**Yes**	**Yes**
Manitoba	**Yes**	**Yes**
Ontario	**Yes**	**Yes**
Quebec	**Yes**	**Yes**
New Brunswick	**Yes**	**Yes**
Nova Scotia	**Yes**	**Yes**
Newfoundland	No	No
	Cannabis TDP	**Cocaine TDP**
Province	Same Sign b/w CSI's	Same Sign b/w CSI's
British Colombia	**Yes**	**Yes**
Alberta	**Yes**	**Yes**
Saskatchewan	No	**Yes**
Manitoba	**Yes**	**Yes**
Ontario	**Yes**	No
Quebec	No	No
New Brunswick	**Yes**	**Yes**
Nova Scotia	**Yes**	**Yes**
Newfoundland	No	**Yes**